

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.



Safety Instructions

Notational



These safety instructions must be followed to ensure your safety and prevent property damage.

Make sure to read the instructions carefully and use the product in the correct manner.

■ Warning / Caution



Failure to follow directions noted by this symbol could result in bodily harm or damage to the equipment.





Prohibited



Important to read and understand at all times



Do not disassemble



Disconnect the plug from the outlet



Do not touch



Ground to prevent an electric shock

An administration fee may be charged if either

- (a) an engineer is called out at your request and there is no defect in the product (i.e. where you have failed to read this user manual).
- (b) you bring the unit to a repair centre and there is no defect in the product
 (i.e. where you have failed to read this user manual).

The amount of such administration charge will be advised to you before any work orhome visit is carried out.

Power



When not used for extended period of time, set your computer to DPM.

If using a screen saver, set it to active screen mode.

The images here are for reference only, and are not applicable in all cases (or countries).

Shortcut to Anti-Afterimage Instructions



- Do not use a damaged power cord or plug or a damaged or loose power outlet.
- Otherwise, this may result in electric shock or fire.



- Do not touch the power plug with wet hands when removing or plugging the plug into the outlet.
- Otherwise, this may result in electric shock.



- Make sure to connect the power cord to a grounded power outlet.
- Otherwise, it may result in electric shock or personal injury.



- Ensure that the power plug is plugged into the power outlet firmly and correctly.
- Otherwise, this may result in fire.



- Do not forcefully bend or pull the power plug and do not place any heavy material on it.
- Otherwise, this may result in fire.



- Do not connect multiple appliances to the same power outlet.
- Otherwise, this may cause fire due to overheating.



- Do not disconnect the power cord while using the product.
- Otherwise, this may result in damage to the product due to electric shock.



- To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.
- Otherwise, this may cause electric shock or fire.



- Use only the power cord provided by our company. Do not use the provided power cord of another product.
- Otherwise, this may result in fire or electric shock.

Installation



Be sure to contact an authorized Service Center when installing your monitor in a location with heavy dust, high or low temperatures, high humidity, and exposed to chemical substances and where it operates for 24 hours such as at airports, train stations etc.

Failure to do so may cause serious damage to your monitor.



- Ensure that at least two persons lift and move the product.
- Otherwise, it may be dropped and cause personal injury, and/or damage the product.





- When installing the product in a cabinet or rack, make sure that the front end of the bottom of the product does not project out.
 - Otherwise, it may fall or cause personal injury.
- Use a cabinet or rack of a size appropriate to the product.



DO NOT PLACE CANDLES, MOSQUITO REPELLANT, CIGA-RETTES AND ANY HEATING APPLIANCES NEAR THE PROD-UCT.

Otherwise, this may result in fire.



- Keep heating appliances as far away from the power cord or the product as possible.
- Otherwise, this may result in electric shock or fire.



- Do not install it in a badly ventilated location such as a bookcase or closet.
- Otherwise, this may result in fire due to an increase in the internal temperature.



- When putting the product down, make sure to put it down softly.
- Otherwise, this may result in damage to the screen display.



- Do not place the front of the product on the floor.
- Otherwise, this may result in damage to the screen display.



- Ensure that an authorized installation company installs the wall mount.
- Otherwise, it may fall and cause personal injury.
- Make sure to install the specified wall mount.



- Install your product in a well ventilated location. Ensure that there is a clearance of more than 4 inches (10 cm) from the wall.
- Otherwise, it may result in fire due to an increase in the internal temperature.



- Ensure that the packaging vinyl is kept away from children.
- Otherwise, it may result in serious harm (suffocation) if children play with it.



- If the height of your monitor is adjustable, do not place any object or part of your body on the stand when lowering it.
- This may cause damage to the product or the person carrying it.



Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.



Clean



When cleaning the PDP Display case or the surface of the TFT-PDP screen, wipe with a slightly moistened, soft fabric.



- Do not spray cleaner directly onto the surface of the product.
- Otherwise, this may result in the discoloration and distortion of the structure and the screen surface may peel off.



- ▶ When cleaning the power plug pins or dusting the power outlet, clean it with a dry cloth.
- · Otherwise, it may result in fire.



- When cleaning the product, make sure to disconnect the power cord.
- Otherwise, it may result in electric shock or fire.



- When cleaning the product, disconnect the power cord and clean it with a soft, dry cloth.
- Do not use chemicals such as wax, benzene, alcohol, thinner, mosquito repellant, lubricant, or cleaner.
- These may change the appearance of the product surface and peel off the indication labels on the product.



Since the product housing is easily scratched, make sure to use the specified cloth only.



- When cleaning the product, do not spray water directly onto the main body of the product.
- Ensure that water does not enter the product and that it is not wet.
- Otherwise, this may result in electric shock, fire or a malfunction.

Others



- ▶ The product is a high voltage product. Do not disassemble, repair or modify the product yourself.
- Otherwise, this may result in electric shock or fire.
- If the product needs to be repaired, contact a Service Center.



- If there is a strange smell or a strange sound or smoke is coming from the product, disconnect the power plug immediately and contact a Service Center.
- Otherwise, this may result in electric shock or fire.



- Do not place this product in a location exposed to moisture, dust, smoke, water, or in a car.
- Otherwise, this may result in electric shock or fire.



- When you drop the product or the case is broken, turn the power off and disconnect the power cord. Contact a Service Center.
- Otherwise, this may result in electric shock or fire.



- If thunder or lightning is occurring, do not touch the power cord or antenna cable.
- Otherwise, this may result in electric shock or fire.



- Do not try to move the monitor by pulling only the wire or the signal cable.
- Otherwise, it may fall and result in electric shock, damage to the product or fire due to damage to the cable.



- Do not lift or move the product back and forwards or right and left while only holding the power cord or signal cables.
- Otherwise, it may fall and result in electric shock, damage to the product or fire due to damage to the cable.



- Make sure that the ventilating opening is not blocked by a table or
- Otherwise, it may result in fire due to an increase in the internal temperature.



- Do not place any containers containing water, vases, flowerpots, medicines as well as any metal on the product.
- If water or a foreign material enters the product, disconnect the power cord and contact a Service Center.
- This may result in a product malfunction, electric shock, or fire.



- Do not use or keep combustible spray or flammable material near the product.
- Otherwise, this may result in an explosion or fire.



- Do not insert any metal, such as chopsticks, coins, pins and steel, or flammable objects, such as matches or paper, inside the product (through the ventilating openings, input and output terminals, etc).
- If water or foreign material enters the product, disconnect the power cord and contact a Service Center.
- Otherwise, this may result in electric shock or fire.



- When using a fixed screen for a long time, an afterimage or stain may occur.
- If you are not using your product for a long period of time, put it into sleep mode or use a moving screen saver.





- Set a resolution and frequency appropriate to the product.
- Otherwise, your eyesight may be damaged.



- When using headphones or earphones, do not turn the volume too high.
- Having the sound too loud may damage your hearing.



To avoid eyestrain, do not sit too close to the product.



- Take a rest for at least five (5) minutes after using the monitor for one (1) hour.
- This reduces eye fatigue.



- Do not install it in an unstable location such as an unstable rack or uneven surface or a location exposed to vibrations.
- Otherwise, it may fall and cause personal injury and/or damage the product.
- If you use the product in a location exposed to vibrations, it may damage the product and result in fire.



- ▶ When moving the product, turn the power off and disconnect the power plug, antenna cable, and all the cables connected to the product.
- Otherwise, it may result in electric shock or fire.



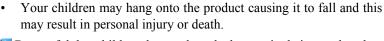
- Ensure that children do not hang onto the product or climb up onto the product.
- The product may fall and cause personal injury or death.



- If you do not use the product for a long period of time, disconnect the power cord from the power outlet.
- Otherwise, this may result in overheating or fire due to dust, and may result in fire due to electric shock or leakage.



Do not place any heavy items or toys or confectionery, such as cookies etc. that may attract the attention of children and to the product.



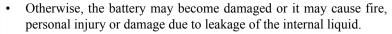


- Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.
- If children have had the battery in their mouths, consult your doctor immediately.





▶ When replacing the battery, insert it with the right polarity (+, -).





Use only the specified standardized batteries, and do not use a new battery and a used battery at the same time.

Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.



The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

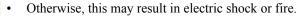


Do not place the product in a location exposed to direct sunlight or near any heat such as a fire or heater.

This may reduce the lifetime of the product, and may result in fire.



Do not drop any objects onto the product or cause any impact to the product.



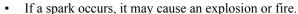


Do not use a humidifier near the product.

Otherwise, this may result in electric shock or fire.



When there is a gas leak, do not touch the product or the power plug; ventilate immediately.





If the product has been turned on for a long time, the display panel becomes hot. Do not touch it.



Keep the small accessories in a location out of the reach of children.



Do not install the product in a location low enough for children to reach.

- Otherwise, it may fall and result in personal injury.
- Since the front part of the product is heavy, install the product on a level and stable surface.





- Do not put any heavy objects on the product.
- This may result in personal injury and/or damage to the product.

Introduction

Package Contents

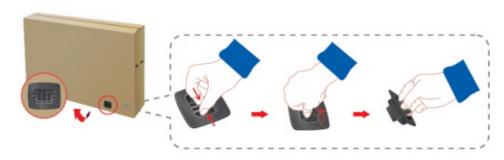


Please make sure the following items are included with your PDP Display.

If any items are missing, contact your dealer.

Contact a local dealer to buy optional items.

Checking the Contents of the Package



Remove the lock from the package box, as shown in the figure above.



Lift up the package box by holding the grooves on both sides of the package box.

Check the contents of the package.

Remove the Styrofoam and vinyl cover.



- After unpacking the package, make sure to check the contents of the package.
- Make sure to keep the package box for transporting the product in the future.
- After unpacking, you may use the lower part of the package box as a temporary stand for product test or operation check.

Unpacking



PDP Display

Manuals



Quick Setup Guide



Warranty Card



User's Guide

(Not available in all locations)

Cables



Power Cord



D-Sub Cable

Others



Remote Control



Batteries (AAA X 2)



Ferrite Core for Power Cord

(Not available in all locations)

Options (P64FT Model Only)



Pen battery charger



USB Dongle



Adapter







Power Cord



Zigbee Touch Pen(IWB-P1) Samsung Interactive whiteboard

Pen battery charger(IWB-C1), USB Dongle(IWB-D1), Zigbee Touch Pen(IWB-P1) only in P64FT model



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the re-ceiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

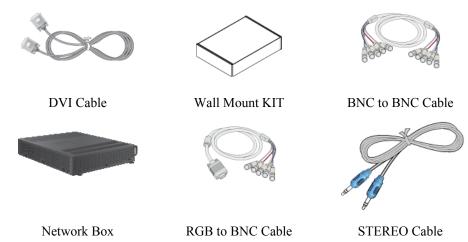
Warning

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

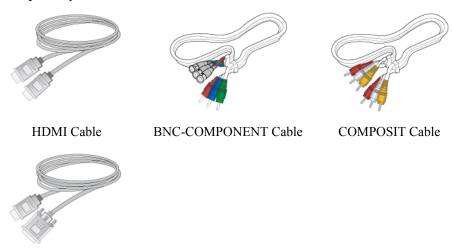
This device complies with Part 15 of the FCC's Rules. Operation is subject to the following two Conditions:

- 1. This device may not cause harmful interference.
- 2. This device must accept ant interference received, including interference that may cause undesirable operation.

Sold separately



Sold separately



HDMI-DVI Cable

■ Warning

• The network box is not compatible with the **Interactive Whiteboard** program.

Ferrite Core



- The ferrite cores are used to shield the cables from interference.
- When connecting a cable, open the ferrite core and clip it around the cable near the plug.

Your PDP Display



The PDP device may interfere with an amateur radio or AM radio.

Front



1

SOURCE button [SOURCE]

Switches from PC mode to Video mode. Changing the source is only allowed for external devices that are connected to the PDP Display at the time.

$$[PC] \rightarrow [DVI] \rightarrow [AV] \rightarrow [HDMI] \rightarrow [MagicInfo] \rightarrow [Component] \rightarrow [BNC]$$

Enter button []

Activates a highlighted menu item.



- This product is not compatible with MagicInfo.
- 2 MENU button [MENU]

Opens the on-screen menu and exits from the menu. Also use to exit the OSD menu or return to the previous menu.

3 - VOL+

Moves from one menu item to another horizontally or adjusts selected menu values. When OSD is not on the screen, push the button to adjust volume.

⁴ V SEL ∧

Moves from one menu item to another vertically or adjusts selected menu values.

6 Power button [७]

Use this button for turning the PDP Display on and off.

6 Power indicator

Shows PowerSaver mode by blinking green



See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your PDP Display OFF when it is not needed or when leaving it unattended for long periods.

Remote Control Sensor

Aim the remote control towards this spot on the PDP Display.

Rear



For detailed information concerning cable connections, refer to Connecting Cables under Setup. The PDP Display's configuration at the back may vary slightly depending on the PDP Display model.



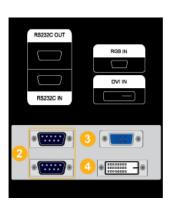




1 POWER IN

The power cord plugs into the PDP Display and the wall plug.





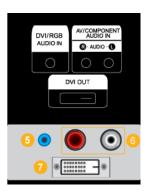
2 RS232C OUT/IN (RS232C Serial PORT)

MDC(Multiple Display Control) Program Port

- 3 RGB IN (PC Connection Terminal (Input))
- Use a D-Sub Cable (15 pin D-Sub) PC mode (Analog PC)
- Connect the RGB IN port on the monitor to the BNC port on the PC using the RGB to BNC cable.
- 4 DVI IN (PC Video Connection Terminal)

Connect the [DVI IN] port on the monitor to the DVI port on the PC using the DVI cable.





5 DVI/RGB AUDIO IN(PC/DVI Audio Connection Terminal (Input))

Connect an audio cable to [R-AUDIO-L] on the monitor and the audio out port on the source device.

6 AV/COMPONENT AUDIO IN [R-AUDIO-L]

Connect an audio cable to [R-AUDIO-L] on the monitor and the audio out port on the source device.

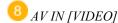


- Connect a monitor to another monitor through a DVI cable.
- Connect the [DVI OUT] port on the monitor to the [HDMI IN] port on the other monitor using the DVI to HDMI cable.

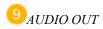
0

 DVI, HDMI and network signals sent via the [DVI OUT] port are displayed on the second display which has the DVI IN port.





Connect the [AV IN (VIDEO)] terminal of your monitor to the video output terminal of the external device using a VIDEO cable.



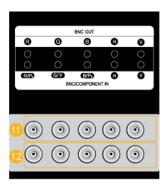
Headphone/External speaker output terminal.



Connect the HDMI terminal at the back of your PDP Display to the HDMI terminal of your digital output device using a HDMI cable.

Up to HDMI cable 1.2 can be supported.





BNC OUT [R, G, B, H, V] (BNC Terminal (Output))

BNC (Analog PC) Connection: connecting the R, G, B, H, V ports.

The number of PDP Displays that can be connected to the loopout depends on the cables, signal source, etc. With cables or signal source where there is no degradation, up to 10 PDP Displays can be connected (May not be supported depending on the connected cable).

12 BNC/COMPONENT IN [R/P_R, G/Y, B/P_B, H, V] (BNC/Component Connection Terminal (input))

- During **BNC** input, please check specifications for the input ports below.
- $[R/P_R]$ --> Red port input
- [G/Y] --> Green port input
- $[B/P_B]$ --> Blue port input
- During component input, please check specifications for the input ports below.
- [R/Y] --> Green port input

- [G/P_B] --> Blue port input
- $[B/P_R]$ --> Red port input





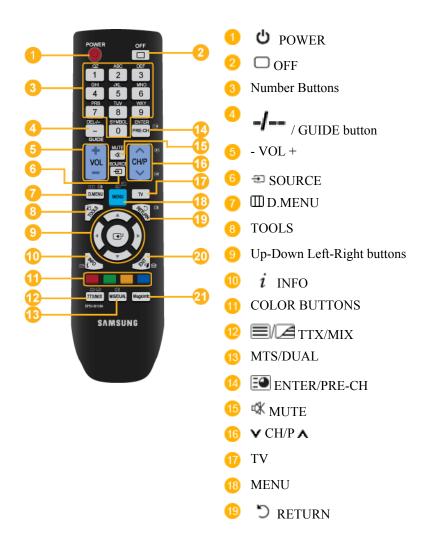


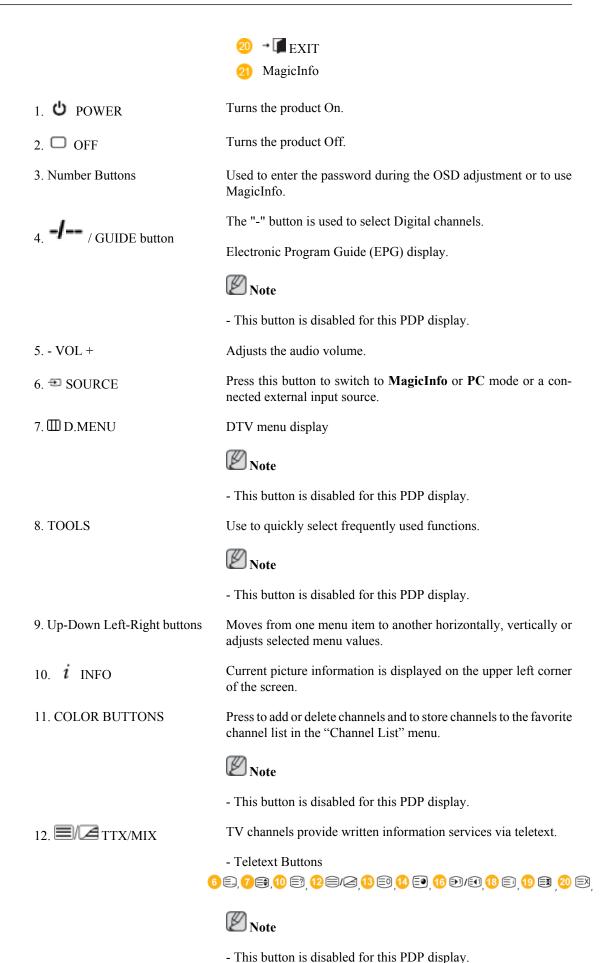
This product has an internal speaker.

Remote Control



The performance of the remote control may be affected by a TV or other electronic device operating near the PDP Display , causing a malfunction due to interference with the frequency.





13. MTS/DUAL



- This button is disabled for this PDP display.

MTS-

You can select MTS (Multichannel Television Stereo) mode.

	Audio Type	MTS/S_Mode	Default
FM Stereo	Mono	Mono	Manual Change
	Stereo	Mono ↔ Stereo	
	SAP	$Mono \leftrightarrow SAP$	Mono

DUAL-

STEREO/MONO, DUAL 1 / DUAL 11 and MONO/NICAM MONO/NICAM STEREO can be operated depending on the broadcasting type by using the DUAL button on the remote control while watching TV.

14. ENTER/PRE-CH

This button is used to return to the immediately previous channel.



- This button is disabled for this PDP display.

Pauses (mutes) the audio output temporarily. This is displayed on the lower left corner of the screen. The audio comes back on if MUTE or - VOL + is pressed in the Mute mode.

16. **∨** CH/P **∧** In **TV** mode, selects TV channels.



- This button is disabled for this PDP display.

17. TV Selects the TV mode directly.



- This button is disabled for this PDP display.

18. MENU Opens the on-screen menu and exits from the menu or closes the adjustment menu.

19. Treatment Returns to the previous menu.

20. Exits from the menu screen.

21. MagicInfo MagicInfo Quick Launch Button.



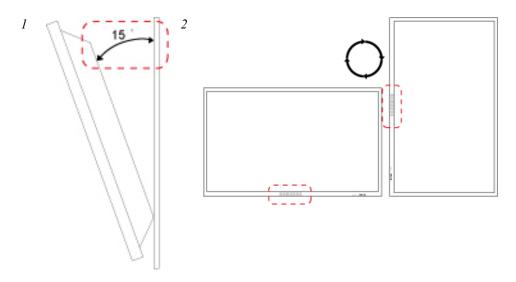
This button is disabled for products that do not support **MagicInfo**.

User Installation Guide



- Be sure to call an installation expert of Samsung Electronics to install the product.
- The warranty becomes invalid if the product is installed by someone other than a professional authorized by Samsung Electronics.
- A Samsung Electronics service center can provide details.

Tilt Angle and Rotation

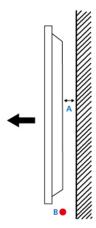


- 1. The product can be tilted up to 15 degrees from a vertical wall.
- 2. To use the product in portrait mode, rotate it clockwise so that the LED indicator is at the bottom.

Ventilation requirement

1. Vertical wall mount condition

<Side view>



A: min. 40 mm

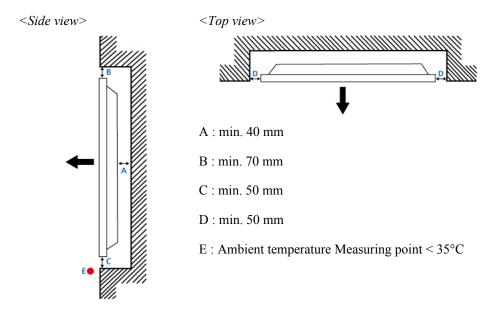
B: Ambient temperature Measuring point < 35°C

• When installing the product onto a vertical wall, be sure there is a 40 mm space or more behind the product for ventilation, as shown above, and maintain the ambient temperature at 35°C or lower.



A Samsung Electronics service center can provide details.

2. Embedded Mount guide

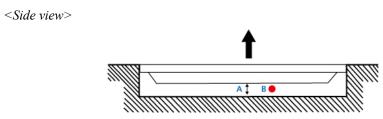


• When embedding the product in a wall, be sure there is some space behind the product for ventilation, as shown above, and maintain the ambient temperature at 35°C or lower.



A Samsung Electronics service center can provide details.

3. Floor mount guide



A: min. 50 mm

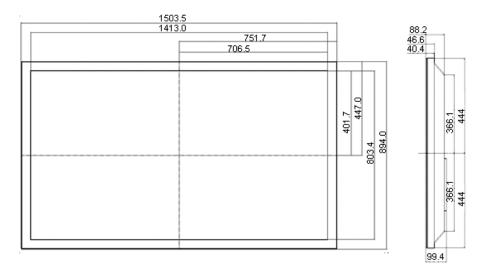
B: Ambient temperature Measuring point < 20°C

• When embedding the product in the floor, be sure there is a 50 mm space or more behind the product for ventilation, as shown above, and maintain the ambient temperature at 20 °C or lower.



A Samsung Electronics service center can provide details.

Mechanical Layout

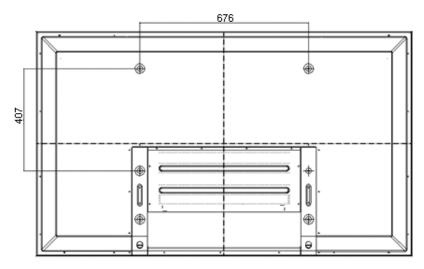


* Unit: mm

Installation VESA Bracket

- When installing VESA, make sure to comply with the international VESA standards.
- Purchasing VESA Bracket and Installation Information: Please contact your nearest SAMSUNG
 Distributor to place an order. After your order is placed, installation professionals will visit you
 and install the bracket.
- At least 2 persons are needed in order to move the PDP Display.
- SAMSUNG is not responsible for any product damage or any injury caused by installation at customer's discretion.

Dimensions



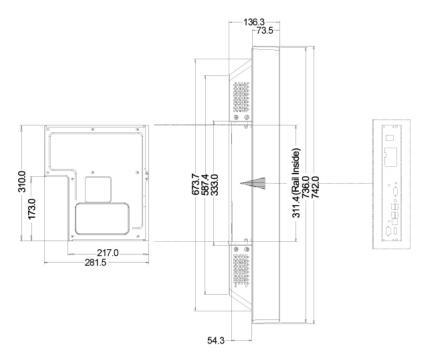
* Unit: mm



For securing the bracket on a wall, use only machine screws of 6 mm diameter and 8 to 12 mm length.

Accessories (sold separately)

• Dimension with other accessories



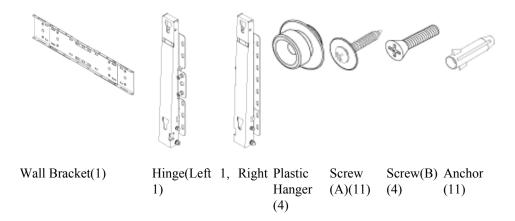
* Unit: mm

Wall Bracket Installation

- Contact a technician for installing the wall bracket.
- SAMSUNG Electronics is not responsible for any damages to the product or harm to customers when the installation is done by the customer.
- This product is for installing on cement walls. The product may not stay in place when installed on plaster or wood.

Components

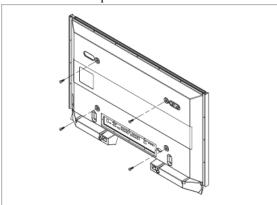
Only use the components and accessories shipped with the product.



To mount the product on the wall bracket

The shape of the product may vary depending on the model. (The assemblies of the plastic hanger and the screw are the same)

1. Remove the 4 screws on the back of the product.

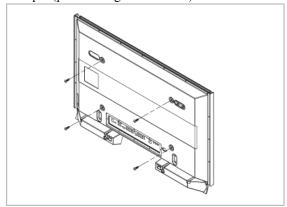


2. Insert the screw B into the plastic hanger.

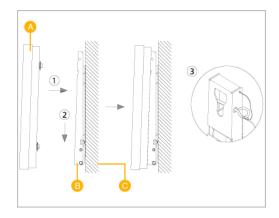




- Mount the product on the wall bracket and make sure it is properly fixed to the left and right plastic hangers.
- Be careful when installing the product on the bracket as fingers can be caught in the holes.
- Make sure the wall bracket is securely fixed to the wall, or the product may not stay in place after installation.
- 3. Tighten the 4 screws in step 2 (plastic hanger + screw B) to the rear holes of the product.



4. Remove safety pin (3) and insert the 4 product holders into the corresponding bracket holes (1). Then place the product(2) so that it is firmly fixed to the bracket. Make sure to re-insert and tighten the safety pin (3) to securely hold the product to the bracket.



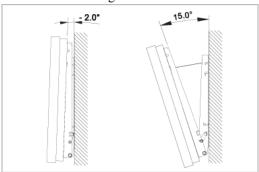
A - PDP Display

B - Wall Bracket

C - Wall

Wall Bracket Angle Adjustment

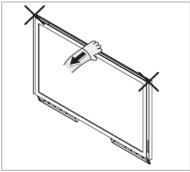
Adjust the bracket angle to -2° before installing it on the wall.



- 1. Fix the product to the wall bracket.
- 2. Hold the product at the top in the center and pull it forward (direction of the arrow) to adjust the angle.



You can adjust the bracket angle between -2° and 15°.



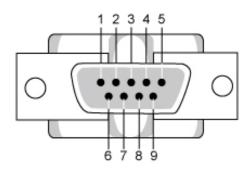
Make sure to use the top center, and not the left or the right side of the product to adjust the angle.

Remote Control (RS232C)

Cable connections

interface	RS232C(9 pin)
pin	TxD(No.2) RxD(No.3) GND(No.5)
Bits rate	9600 bps
Data Bits	8 bit
Parity	None
Stop Bits	1 bit
Flow control	None
Maximum length	15 m (only shielded type)

• Pin assignment

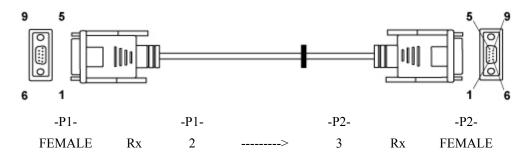


Pin	Signal
1	Data Carrier Detect
2	Received Data
3	Transmitted Data
4	Data Terminal Ready
5	Signal Ground
6	Data Set Ready
7	Request to Send
8	Clear to Send
9	Ring Indicator

• RS232C cable

Connector: 9-pin D-Sub

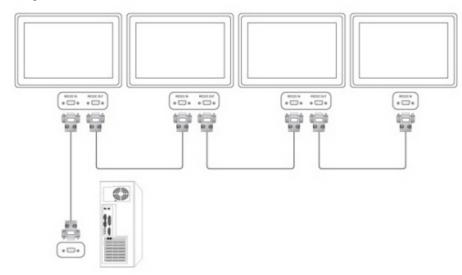
Cable: Cross (reversed) cable



Tx 3 <----- 2 Tx

Gnd 5 ----- 5 Gnd

Connecting method



Control codes

• Get control

Header	command	ID	DATA Length	CheckSum
0xAA	command type	ID	0	Checksum

• Set control

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	command type	ID	1	Value	Checksum

· commanding words

No.	command type	command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Screen Mode control	0x18	-
5	Screen Size control	0x19	0~255
6	PIP on/off control	0x3C	0~1
7	Auto adjustment control	0x3D	0
8	Video wall Mode control	0x5C	0~1
9	Safety Lock	0x5D	0~1

- ID should show hexadecimal value of assigned ID, but ID 0 should be 0xFF.

- Every communication will be made in hexadecimals and Checksum is the sum of all remainings. If it exceeds two digits, for example, it is 11+FF+01+01=112, discard the number in the first digit like below.

example)PowerOn&ID=0

Header	command	ID	DATA Length	DATA 1	CheckSum
0xAA	0x11		1	Power	
Header	command		DATA	DATA 1	
		ID	Length		12
0xAA	0x11		1	1	

If you want to control every mechanism connected with Serial Cable regardless of its ID, set ID part to "0xFE" and send commands. At the time, each product will follow commands but it will not respond with ACK.

Power Control

• Function

Personal Computer turns TV or Monitor power ON/OFF.

• Get Power ON/OFF Status

Header	command	ID	DATA Length	CheckSum
0xAA	0x11	ID	0	Checksum

• Set Power ON/OFF

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	0x11		1	Power	

Power: Power code to be set on TV or Monitor

1: Power ON

0: Power OFF

Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'A'	0x11	Power	Sulli

Power: Same as above

Nak

Header command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
----------------	----	----------------	---------	-------	------	--------------

0xAA 0xFF	3	'N'	0x11	ERR	
-----------	---	-----	------	-----	--

ERR: Error code that shows what occurred error is

• Volume Control

Function

Personal Computer changes volume of TV or Monitor.

• Get Volume Status

Header	command	ID	DATA Length	CheckSum
0xAA	0x12	ID	0	Checksum

• Set Volume

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	0x12		1	Volume	

Volume : Volume value code to be set on TV or Monitor (0 $\sim 100)$

• Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'A'	0x12	Volume	Sum

Volume: Same as above

Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'N'	0x12	ERR	Sum

ERR: Error code that shows what occurred error is

• Input Source Control

• Function

Personal Computer changes input source of TV or Monitor.

• Get Input Source Status

Header	command	ID	DATA Length	Charles and
0xAA	0x14	עוו	0	CheckSum

Set Input Source

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	0x14		1	Input Source	

Input Source: Input Source code to be set on TV or Monitor

0x14	PC
0x1E	BNC
0x18	DVI
0x0C	AV
0x04	S-Video
0x08	Component
0x20	MagicInfo
0x1F	DVI_VIDEO
0x30	RF(TV)
0x40	DTV
0x21	HDMI1
0x22	HDMI1_PC
0x23	HDMI2
0x24	HDMI2_PC
0x25	DisplayPort



A Caution

DVI_VIDEO, HDMI1_PC, HDMI2_PC \rightarrow Get Only

In the case of MagicInfo, only possible with models include MagicInfo

In the case of TV, only possible with models include TV.

Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check
0xAA	0xFF	ID	3	'A'	0x14	Input Source	Sum

Input Source : Same as above

Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'N'	0x14	ERR	Sulli

ERR: Error code that shows what occurred error is

Screen Mode Control

Function

Personal Computer changes "Screen Mode" of TV or Monitor

Cannot be controlled when Video Wall is on.



Only works with models include TV.

Get Screen Mode Status

Header	command	ID	DATA Length	CheckSum
0xAA	0x18	ID	0	Checksum

Set Picture Size

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	0x18		1	Screen Mode	

Screen Mode: Screen Mode code to be set on TV or Monitor

0x01	16:9
0x04	Zoom
0x31	Wide Zoom
0x0B	4:3

Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check
0xAA	0xFF		3	'A'	0x18	Screen Mode	Sum

Screen Mode: Same as above

Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check
0xAA	0xFF		3	'N'	0x18	ERR	Sum

ERR: Error code that shows what occurred error is

Screen Size Control

Function

Personal Computer recognizes the screen size of TV or Monitor.

• Get Screen Size Status

Header	command	ID	DATA Length	CheckSum
0xAA	0x19	ID	0	CheckSum

Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check
0xAA	0xFF	ID	3	'A'	0x19	Screen Size	Sum

Screen Size : Screen Size of TV or Monitor (Range : $0 \sim 255$, Unit : Inch)

• Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'N'	0x19	ERR	Suili

ERR: Error code that shows what occurred error is

• PIP ON / OFF Control

Function

The PC turns the PIP function of a TV or Monitor ON / OFF.

This does not operate in MagicInfo mode.

• Get the PIP ON / OFF Status

Header	command	ID	DATA Length	CheckSum
0xAA	0x3C	ID	0	CheckSulli

• Set the PIP ON / OFF

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	0x3C		1	PIP	

PIP : The PIP ON / OFF code to set for the TV or Monitor

1: PIP ON

0: PIP OFF

Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'A'	0x3C	PIP	Sum

PIP: Same as above

Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'N'	0x3C	ERR	Sulli

ERR: Error code that shows what occurred error is

• Auto Adjustment Control (PC, BNC Only)

• Function

Personal Computer controls PC system screen automatically.

• Get Auto Adjustment Status

None

• Set Auto Adjustment

Header	command	ID	DATA Length	DATA	ChaolrCum
0xAA	0x3D	ID ID	1	Auto Adjust- ment	CheckSum

Auto Adjustment: 0x00 (Always)

• Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check
0xAA	0xFF	ID	3	'A'	0x3D	Auto Adjustment	Sum

• Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'N'	0x3D	ERR	Sum

ERR: Error code that shows what occurred error is

· Video Wall Mode Control

• Function

Personal Computer converts Video Wall Mode of TV or Monitor when Video Wall is ON.

Only works with TV or Monitor where Video Wall is on.

Does not operate in MagicInfo

Get Video Wall Mode

Header	r command	ID	DATA Length	CheckSum
0xAA	0x5C		0	CheckSum

Set Video Wall Mode

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	0x5C	ID ID	1	Video Wall Mode	CheckSum

Video Wall Mode: Video Wall Mode code to be set on TV or Monitor

1 : **Full**

0 : Natural

• Ack

Header	command		DATA Length	Ack/Nak	r-CMD	Val1	Chaola
0xAA	0xFF	ID	3	'A'	0x5C	Video Wall Mode	Check Sum

Video Wall Mode: same as above

Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'N'	0x5C	ERR	Sum

ERR: Error code that shows what occurred error is

Safety Lock

• Function

Personal Computer turns Safety Lock function of TV or Monitor ON / OFF.

Can operate regardless of whether power is ON / OFF.

• Get Safety Lock Status

Header	command	ID	DATA Length	ChapleSure
0xAA	0x5D	מו	0	CheckSum

• Set Safety Lock Enable / Disable

Header	command	ID	DATA Length	DATA	CheckSum
0xAA	0x5D		1	Safety Lock	

Safety Lock: Lock code to be set on TV or Monitor

1 : ON

0: OFF

• Ack

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check
0xAA	0xFF	110	3	'A'	0x5D	Safety Lock	Sum

Safety Lock : Same as above

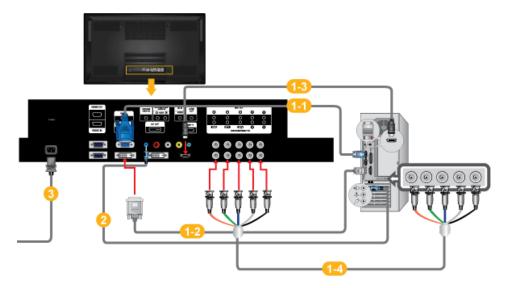
• Nak

Header	command	ID	DATA Length	Ack/Nak	r-CMD	Val1	Check Sum
0xAA	0xFF		3	'N'	0x5D	ERR	Sulli

ERR: Error code that shows what occurred error is

Connections

Connecting a Computer



- 1 There are several ways to connect the computer to the monitor. Choose one from the following options.
 - Using the D-sub (Analog) connector on the video card.
 - Connect the D-sub to the 15-pin, [RGB IN] port on the back of your PDP Display and the 15 pin D-sub Port on the computer.



- 1-2 Using the DVI (Digital) connector on the video card.
- Connect the DVI Cable to the [DVI IN] port on the back of your PDP Display and the DVI port on the computer.



1-3 Using the HDMI (digital) output on the graphics card.

Connect the [HDMI IN] port on the PDP Display to the HDMI port on the PC using the HDMI cable.

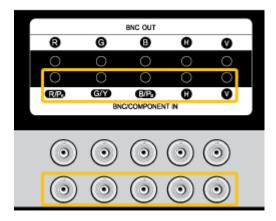




When the HDMI cable to the PC, ensure that you select **HDMI** from both the **Source List** and **Edit Name** before selecting **PC** or **DVI** device so that normal PC screen and sound can be outputted. Note that sound is only available when connected according to the option that follows.

Using the BNC (Analog) connector on the video card.

 Connect the [BNC/COMPONENT IN] port on the monitor to the BNC port on the PC using the BNC to BNC cable.



- 2 Connect the audio cable for your PDP Display to the audio port on the back of the PDP Display.
- 3 Connect the power cord for your PDP Display to the power port on the back of the PDP Display. .



- Turn on both your computer and the PDP Display.
- Contact a local SAMSUNG Electronics Service Center to buy optional items.

Using Whiteboard (P64FT Model Only)



- Whiteboard does not support MagicInfo mode.
- A stylus pen may be subject to electromagnetic interference.
- This wireless device is subject to electromagnetic interference. Do not use this device for a purpose that may affect personal safety.

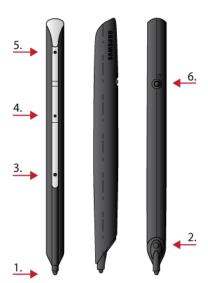
1. Connecting to a PC

To use Whiteboard, the product should first be connected to a PC.

Refer to "Connecting a Computer" for details about how to connect the product to a PC.

2. Components and Their Functions

2-1. Stylus pen



No.	Parts	Functions
1	Pen tip	Enables the stylus pen when the sensor on it is pressed.
2	IR sensor	Receives IR signals from the panel.
3	SW1	Performs the right-click command.
4	SW2	Functions as the Page Down key on the keyboard. Another function can be assigned as required.
5	SW3	Functions as the Page Up key on the keyboard. Another function can be assigned as required.
6	SW4	power switch

2-2. Pen Battery Charger



No.	Parts	Functions
1	Power in	Connects to the power cable via the adapter.
2	LED	Shows the charging status.
3	Stylus pen holders	Charge the batteries on the stylus pens mounted in correct orientation.

2-3 . Charging a Stylus Pen Battery



- Apply a ferrite core when you charge a pen battery in the charger.
- It is recommended that you use a ferrite core when charging a stylus pen battery to avoid electromagnetic interference.
- Before you connect the cable, open the ferrite core and wrap the cable around the ferrite core as shown below.



• Red LED: Charging / Orange LED: Error / Green LED: Fully charged

- If the LED remains green when you charge a pen battery (indicating fully charged) but the pen cannot power on, contact Samsung Customer Service Center.
- Charging a pen battery may fail unless the pen is mounted in correct orientation on the holder.

Connecting to a Stylus Pen

3-1. Attaching the Dongle

To use a dedicated stylus pen for Whiteboard, insert the dongle into the USB slot on your PC.



• Ensure the dongle is installed 1m or higher from the ground.



3-2. Using a Stylus Pen



To use a stylus pen, press the black button at the upper part of the pen.

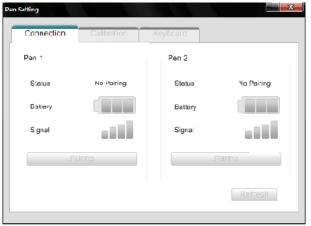
3-3. Pairing Stylus Pens with the Monitor

To connect dual pens to the monitor, install the drawing program in the provided CD on the PC. Refer to "Installing Whiteboard" for details about how to install the drawing program.

• Go to Control Panel and run Samsung Interactive Whiteboard.

(Alternatively, click the star icon[] -> Pen Setting in the bottom left corner of the drawing program.)

- Press and hold the (black) power button on the stylus pen for 10 seconds when the power button is turned off.
 - Powering on the pen: Press the black power button once. The red LED will blink several times and the pen will power on.
 - Powering off the pen: Press and hold the black power button for 3 seconds. The red LED will blink several times and the pen will power off.
- Press Pairing in the Samsung Interactive Whiteboard program. If No Pairing changes to Conneted, a pairing has been successfully performed and taps of the pen on the screen will immediately be recognized.



• Pairing is required only once. After a pen is paired with the monitor, powering on the pen will enable taps of the pen on the screen to be recognized.

3-4. Activating Calibration

• Go to Control Panel and run Samsung Interactive Whiteboard.

(Alternatively, click the star icon [] -> Pen Setting in the bottom left corner of the drawing program.)

- Go to the Calibration tab.
- Click Start Calibration.
- Tap the four circles in sequence using the pen, following the instructions displayed.

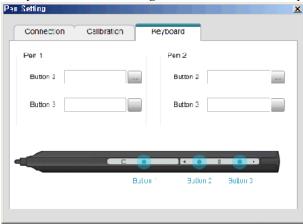


· Click OK.

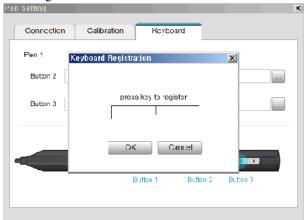
3-5. Adding Keyboard Commands to Pens

Make better use of Whiteboard by adding keyboard commands to pens.

1. Go to Pen Setting > Keyboard in the Samsung Interactive Whiteboard program.



2. Select a button. When the key assignment window appears, press the keyboard key you want to assign. The key will be assigned to the button.



3-6. Right-click Function



Press **Button 1** on the pen when the pen contacts the PDP screen. The right-click function of a mouse will be performed.



• The right-click function does not work unless the pen contacts the PDP screen.

4. Afterimage Burn-in Prevention



- Afterimages can occur on this product due to the nature of PDP devices and the manufacturer shall not be liable for this issue.
- To prevent afterimages, it is recommended that you observe the following instructions when using the product.

Instructions

- Ensure the same still image is not displayed for long hours.
 - When you need to display the same still image for long hours, be sure to activate Screen saver at regular intervals.
 - It is best to activate Screen saver when the Samsung Interactive Whiteboard is not in use.
 - · Using screen saver

Activating screen saver (when the Interactive Whiteboard software is not in use)

• Go to MENU -> Setup-> Safety Screen in the onscreen display menu and select Pattern mode. A screen saver pattern will activate.



Activating screen saver (when the Interactive Whiteboard software is in use)

Click [and select Eliminate Image Retention in the Interactive Samsung Interactive Whiteboard. A screen saver pattern will be activated.



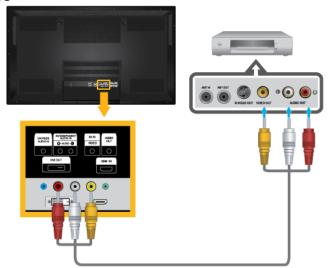
It is recommended that you activate screen saver for a short period of time before you power off the PC.

- Activation of Screen saver after the interactive whiteboard program is closed
 - If the PC is turned off: Screen saver will be active for a specified time before the PC powers of
 - If the PC is not turned off: The interactive whiteboard program will be closed only.

Connecting to Other devices

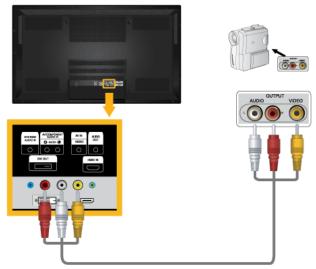
- AV input devices such as DVD players, VCRs or camcorders as well as your computer can be connected to the PDP Display. For detailed information on connecting AV input devices, refer to the contents under Adjusting Your PDP Display.
- The PDP Display's configuration at the back may vary slightly depending on the PDP Display model.

Connecting AV Devices



- 1. Connect an audio cable to the audio output port on the external device and [AV/COMPONENT AUDIO IN[R-AUDIO-L]] port on the monitor, and connect the video output port on the external device to the [AV IN [VIDEO]] port on the monitor.
- 2. Play the DVD, VCR or Camcorder with a DVD disc or tape inserted.
- 3. Select **AV** using the SOURCE button on the front of the PDP display or on the remote.

Connecting to a Camcorder



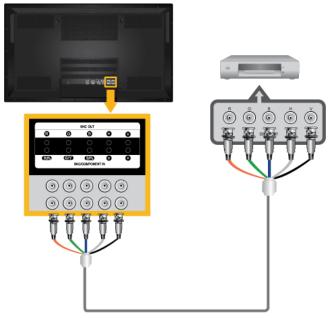
- Locate the AV output jacks on the camcorder. They are usually found on the side or back of the camcorder. Connect a set of audio cables between the AUDIO OUTPUT jacks on the camcorder and the [AV/COMPONENT AUDIO IN [R-AUDIO-L]] on the PDP Display.
- 2. Connect a video cable between the VIDEO OUTPUT jack on the camcorder and the [AV IN [VIDEO]] on the PDP Display.
- 3. Select **AV** for the Camcorder connection using the SOURCE button on the front of the PDP Display or on the remote control.
- 4. Then, start the Camcorder with a tape inserted.



The audio-video cables shown here are usually included with a Camcorder. (If not, check your local electronics store.)

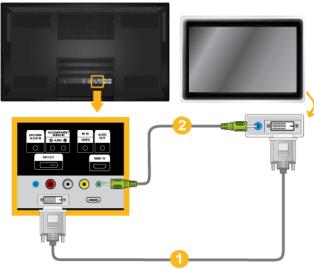
If your camcorder is stereo, you need to connect a set of two cables.

Connecting the BNC to BNC cable



- 1. Connect the [BNC/COMPONENT IN [R/P_R, G/Y, B/P_B]] ports on the monitor to the BNC port on the external device using the BNC to BNC cable.
- 2. Select BNC using the SOURCE button on the front of the PDP Display or on the remote control.

Connecting Using a DVI Cable



- 1. Connect between the [DVI OUT] port on the PDP Display and the input port on another monitor using a DVI cable.
- 2. Connect between the [AUDIO OUT] port on the PDP Display and the audio input port on another monitor using a stereo cable.
- 3. Select DVI using the SOURCE button on the front of the PDP Display or on the remote control.



[DVI OUT] does not support HDCP.

Connecting Using a HDMI Cable

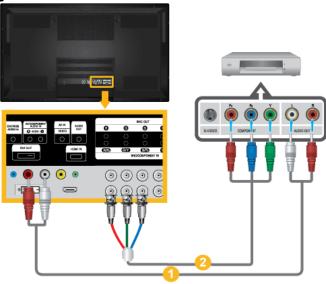


- 1. Connect input devices such as a Blu-Ray/DVD player to the [HDMI IN] terminal of the PDP Display using an HDMI cable.
- 2. Select HDMI using the SOURCE button on the front of the PDP Display or on the remote control.



In **HDMI** mode, only PCM format audio is supported.

Connecting a DVD Player

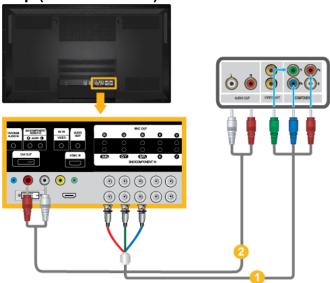


- 1. Connect a set of audio cables between the [AV/COMPONENT AUDIO IN [R-AUDIO-L]] on the PDP Display and the AUDIO OUT jacks on the DVD player.
- 2. Connect a Component cable between the [BNC/COMPONENT IN [R/P $_R$, G/Y, B/P $_B$]] port on the PDP Display and the P $_R$, Y, P $_B$ jacks on the DVD player.



- Select **Component** for the connection to a DVD player using the SOURCE button on the front of the PDP Display or on the remote control.
- Then, start the DVD Player with a DVD disc inserted.
- A component cable is optional.
- For an explanation of Component video, consult your DVD manual.

Connecting a DTV Set Top (Cable/Satellite) Box

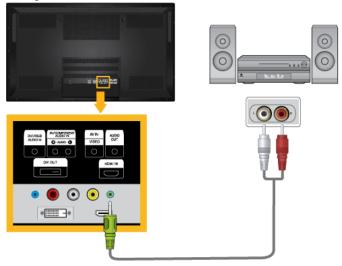


- 1. Connect a Component cable between the [BNC/COMPONENT IN $[R/P_R, G/Y, B/P_B]$] port on the PDP Display and the P_R , Y, P_B jacks on the Set Top Box.
- 2. Connect a set of audio cables between the [AV COMPONENT AUDIO IN [R-AUDIO-L]] on the PDP Display and the AUDIO OUT jacks on the Set Top Box.



- Select **Component** for the connection to a DTV Set Top Box using the SOURCE button on the front of the PDP Display or on the remote control.
- For an explanation of Component video, see your Set Top Box owner's manual.

Connecting to an Audio System



1. Connect a set of audio cables between the AUX L, R jacks on the AUDIO SYSTEM and [AUDIO OUT] on PDP Display.

Using the Software

Installing Whiteboard (P64FT Model Only)

- 1. First, insert the Whiteboard installation CD into the CD-ROM drive.
- 2. Double-click Whiteboard.exe.
- 3. Click "Next" in the displayed installation wizard screen.
- 4. When the "License Agreement" window appears, select "I accept the terms of the license agreement" and click "Next."
- 5. Select "PC Mode" and click "Next" in the displayed "Setup Type" window.
- 6. Select "PDP Monitor" and click "Next."
- 7. Click "Install" in the displayed "Ready to Install the Program" window.
- 8. A window showing the installation progress will appear.
- 9. Click "Finish" in the displayed "InstallShield Wizard Complete" window.
- 10. After the installation, the **Samsung Interactive Whiteboard** shortcut icon will be created on the desktop.

MDC (Multiple Display Control)

Installation

- 1. Insert the installation CD into the CD-ROM drive.
- 2. Click the MDC Unified installation program.



- If a software installation window is not displayed on the main screen, install with the "MDC Unified" execution file in the MDC folder on the CD.
- 3. Click "Next" in the displayed Installation Wizard screen.
- 4. In the "License Agreement" window displayed, select "I accept the terms in the license agreement" and click "Next".
- 5. In the displayed "Customer Information" window, fill out all the information fields and click "Next".
- 6. In the displayed "Destination Folder" window, select the directory path you want to install the program in and click "Next".



- If the directory path is not specified, the program will be installed in the default directory path.
- 7. In the displayed "Ready to Install the Program" window, check the directory path to install the program in and click "Install".
- 8. Installation progress will be displayed.
- 9. Click "Finish" in the displayed "InstallShield Wizard Complete" window.

10. The MDC Unified shortcut icon will be created on the desktop after installation.



- The MDC execution icon may not be displayed depending on the PC system or product specifications.
- Press F5 if the execution icon is not displayed.

Uninstallation

- 1. Select Settings > Control Panel on the Start menu and double-click Add/Delete Program.
- 2. Select MDC Unified from the list and click Change/Remove.



• MDC installation can be affected by the graphics card, mother board and network conditions.





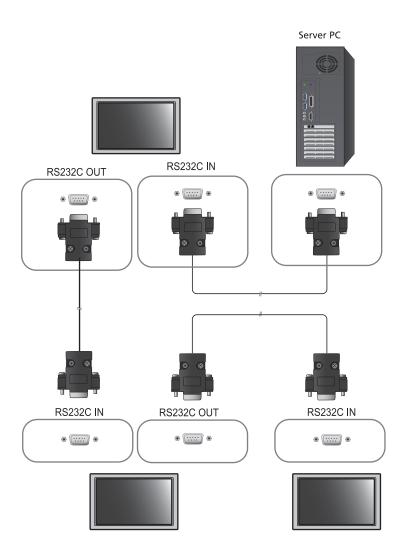
What is MDC?

Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC.

Connecting to MDC

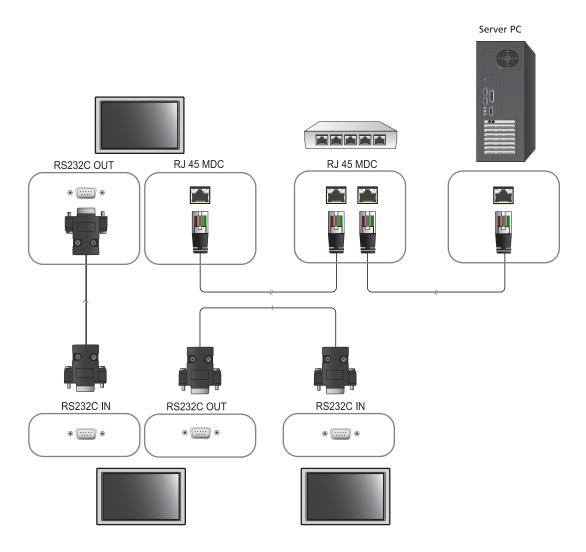
Using MDC via RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.



Using MDC via Ethernet

Enter the IP for the primary display device and connect the device to the PC. One display device can connect to another using an RS-232C serial cable.

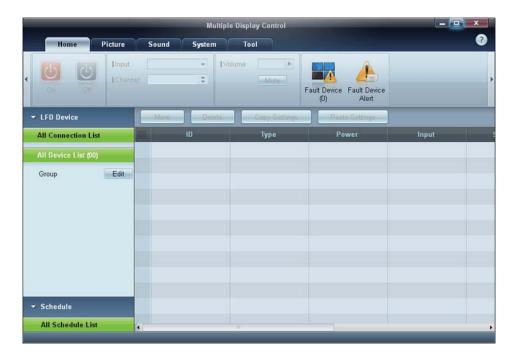


Connection Management

Connection management includes the Connection list and Connection list modification options.

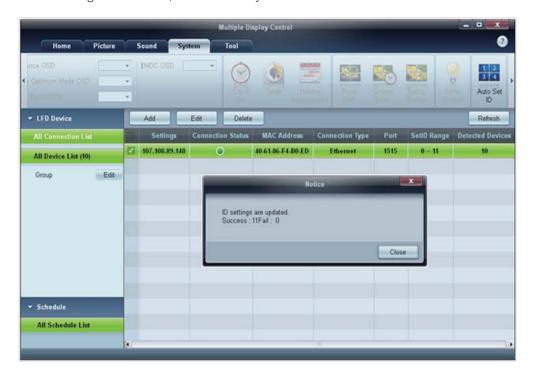
Connection list – Connection list shows the details of the connections such as connection setting (IP/COM, Port No, MAC, and Connection Type), connection status, Set ID Range, and detected devices. Each connection can contain a maximum of 100 devices connected in serial daisy-chain fashion. All the LFDs detected in a connection are displayed in the Device list, where the user can make groups and send commands to detected devices.

Connection list modification options – Connection modification options includes Add, Edit, Delete, and Refresh.



Auto Set ID

Auto Set ID feature assigns a Set ID for all the LFDs connected in daisy-chain of a selected connection. There can be a maximum of 100 LFDs in a connection. The Set ID is assigned sequentially in the daisy-chain running from 1 to 99, and then finally to Set ID 0.



Cloning

Using the Cloning feature, you can copy the setting of one LFD and apply it to multiple selected LFDs. You can select specific tab categories or all tab categories for cloning, using the copy setting option window.



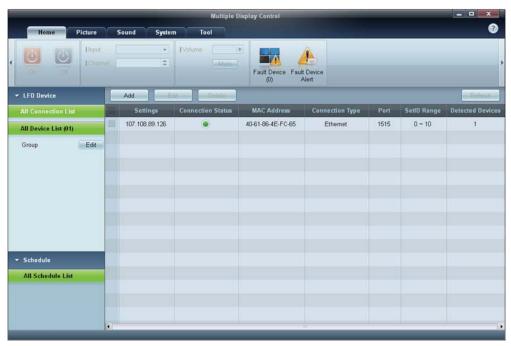
Command Retry

This feature is used to specify the maximum number of times the MDC command will be retried in case of there being no reply or a corrupted reply from an LFD. The retry count value can be set using the MDC options window. The retry count value must be between 1-10. The default value is 1.

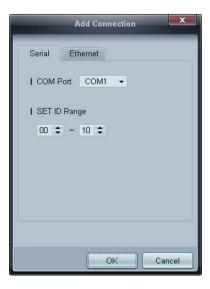


Getting Started with MDC

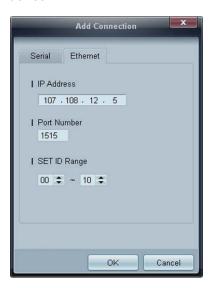
1 To start the program, click **Start** \rightarrow **Programs** \rightarrow **Samsung** \rightarrow **MDC Unified**.



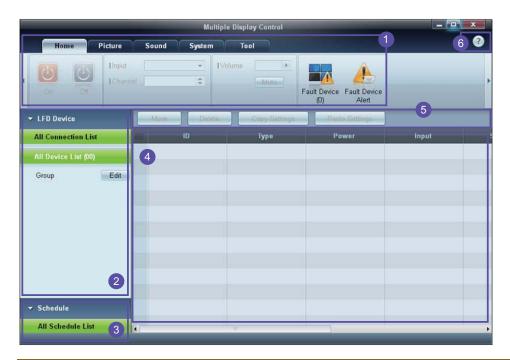
- 2 Click Add to add a display device.
 - If the connection is established via RS232C, go to Serial and specify the COM Port.



• If the connection is established via **Ethernet**, enter the IP that was entered for the display device.



Main Screen Layout



1 Menu Bar	Change the status of a display device or the properties of the program.
2 Device Category	View a list of connected display devices or device groups.
3 Schedule Category	View a list of schedules for display devices.
4 Set List	Select the display device you want to adjust.
6 Modify the Set List	Add, edit, regroup or delete sets.
6 Help Topics	Display help topics for the program.

Menus

You can power on or off a selected device or change the input source or volume of the device.

Choose display devices from the list of sets, and select the **Home** tab.



1 Home

Select an item and change the corresponding setting.

Power

- On: Power on a selected display.
- Off: Power off a selected dis

Input

Input Source : Change the input source.



- Input sources available can vary depending on the Display Device Models.
- The input source can be changed only for displays that are turned on.
- Channel : Change the channel.



- The TV channel can be changed by using the up/down arrow keys.
- The channel can be changed only when the input source is TV.
- Only registered channels can be selected.

2 Volume



The volume can be changed or the sound can be muted only for displays that are turned on.

Volume

The volume can be adjusted using the slider bar in the range of 0 to 100.
 Adjust the volume of a selected display.

Input

Enable or disable Mute for a selected display.

Mute will automatically be disabled if **Volume** is adjusted when **Mute** is on.

3 Alert

Fault Device

This menu shows a list of display devices which have following errors - fan error, temperature error, brightness sensor error, or lamp error.

Select a display device from the list. The **Repair** button will be enabled. Click the refresh button to refresh the error status of the display device. The recovered display device will disappear from the **Fault Device List**.

Fault Device Alert

Display device in which error is detected will be reported by email.

Fill in all required fields. The **Test** and **OK** buttons will be enabled. Ensure the **Sender** information and at least one **Recipient** are entered.

Screen Adjustment

The screen settings (contrast, brightness, etc.) can be adjusted.

Choose display devices from the list of sets, and select the Picture tab.

Custom

Select an item and change the corresponding screen setting.





- Color and Tint are not available if the input source is PC.
- Red, Green, Blue and PC Screen Adjustment are not available if the input source is Video.
- Color, Tint, Color Tone, Color Temp, Red, Green, Blue and PC Screen Adjustment are not available if both PC Source and Video Source are selected.

Contrast

Adjust the contrast for the selected display device.

Brightness

Adjust the brightness for the selected display device.

Color

Adjust the colors for the selected display device.

Tint (G/R)

Adjust the tint for the selected display device.

Color Tone

Adjust the background color tone for the selected display device.

Color Temp

Adjust the color temperature for the selected display device.



This option is enabled if Color Tone is set to Off.

Red

Customize the intensity of red color for the selected display device.

Green

Customize the intensity of green color for the selected display device.

Blue

Customize the intensity of blue color for the selected display device.

Options



Dynamic Contrast

Adjust the **Dynamic Contrast** for the selected display device.

Gamma Control

Change the gamma value for the selected display.

Auto Motion Plus

This option is used to view dynamic images.

- Off: Disable the Auto Motion Plus function.
- Clear: Set the level of Auto Motion Plus to clear. This mode is suitable to display vivid images.
- Standard: Set the level of Auto Motion Plus to standard.
- **Smooth**: Set the level of **Auto Motion Plus** to smooth. This mode is suitable to display smooth images.
- Custom: Customize the level of screen burn-in or flickering.
- **Demo**: This function demonstrates the technology of **Auto Motion Plus**. The result when the mode is changed can be previewed on the left side of the window.

Brightness Sensor

Enable or disable the **Brightness Sensor** for the selected display device.

The **Brightness Sensor** detects the ambient light intensity and automatically adjusts the screen brightness.



Brightness Sensor may not be available depending on the product.

Size



Picture Size

Adjust the screen size for the selected display device.

The **Detail** item will be disabled if **Picture Size** is set to a mode that does not support detailed configuration.

The -/+ buttons can be used to adjust **Zoom**.

The screen can be relocated using the up/down/left/right buttons.

Detail

You can view details of the selected screen size.

PC Screen Adjustment

Frequency adjustment or fine-tuning is available by using the -/+ buttons in **Coarse** or **Fine**.

To relocate the screen, click one of the four images below **Position**.

To automatically adjust the frequency, fine-tune or relocate the screen, click **Auto Adjustment**.

Sound Adjustment

You can change the sound settings.

Choose display devices from the list of sets, and select the **Sound** tab.





The Bass or Treble item will be disabled if the item is not supported by the selected set.

Bass

Adjust the bass for the selected display.

Treble

Adjust the treble for the selected display.

Balance (L/R)

Adjust the volume of the left and right speakers of the selected display device.

SRS TS XT

Enable or disable the SRS TS XT effect for the selected display device.

System Setup

Choose display devices from the list of sets, and select the **System** tab.

Video Wall

The **Video Wall** function can be used to display part of a whole picture or repeat the same picture on each of connected multiple display devices.



Video Wall is enabled only when devices are in the group.

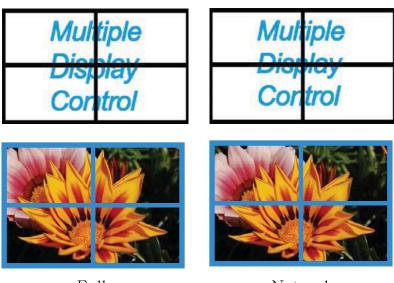


Video Wall

Enable or disable Video Wall.

Format

Select the format to display the split screen.



Full Natural

Н

Select the number of horizontal display devices.

A maximum of 15 displays can be arranged in a row.



A maximum of 6 can be assigned to V if 15 is assigned to H.

V

Select the number of vertical display devices.

A maximum of 15 displays can be arranged in a row.



A maximum of 6 can be assigned to V if 15 is assigned to H.

Screen Position

View the layout of displays (configured by the screen divider) or change the layout as required.

Screen Position and Preview are enabled when Video Wall is set to on.

Note that if multiple sets are selected, **Preview** is enabled only if the settings for H and V match the layout of the selected sets.

To change the **Position**, select a set and drag it to a new position.



The range of screen divider settings may differ depending on the model.

PIP

Basic information required to adjust **PIP** will appear in the menu screen.



- PIP will be disabled when Video Wall is ON.
- Note that Picture Size is disabled when PIP is ON.



PIP Size

View the **PIP Size** of the current display.

PIP Source

Select a PIP input source.

Sound Select

Select and enable the sound from either the primary screen or secondary screen.

Channel

The channel can be changed if **PIP Source** is **TV**.

General



User Auto Color

Automatically adjust the screen colors.



Available only in PC mode.

Auto Power

Set the product to automatically power on.

Standby Control

Set the standby mode to activate if an input source is not detected.

Fan & Temperature



Configure the settings required to detect the fan speed and internal temperature for the product's protection.

Fan Control

Select a method to configure the fan speed.

Fan Speed

Configure the fan speed.

Temperature

Detect the internal temperature by specifying the range of temperature.

Security



Safety Lock

Lock the on-screen menus.



To unlock the menus, set Safety Lock to Off.

Button Lock

Lock the buttons on the display device.



To unlock the buttons, set Button Lock to Off.

OSD Display



Source OSD

Select whether to display a message when the **Source** is changed.

Not Optimum Mode OSD

Select whether to display a message when a non-compatible mode is selected.

No Signal OSD

Select whether to display a message when there is no input signal.

MDC OSD

Select whether to display a message when settings are changed by the MDC.

Time



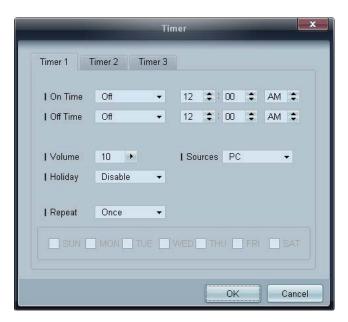
Clock Set



Change the current time on the selected display device according to the time set on a PC.

If the time is not set on the display device, null values will be displayed.

Timer



- On Time: Set the time to power on the selected display device.
- Off Time: Set the time to power off the selected display device.
- Volume: Specify the volume of the display device when it is powered on by On Time.
- Source: Specify the input source of the display device when it is powered on by On Time.
- Holiday: The Holiday Management settings can be applied to the Timer.
- Repeat: Specify the period for which you want to repeat the selected Timer.

- Once: Activate the timer only one time.
- EveryDay: Activate the timer every day.
- Mon~Fri: Activate the timer from Monday through Friday.
- Mon~Sat: Activate the timer on Saturdays and Sundays.
- Manual: Customize days of the week.
- The checkboxes to select days of the week below **Repeat** are enabled only if **Manual** is selected.

Holiday Management

Holiday Management allows you to prevent devices that are set to be powered on by the **Timer** from turning on at a specified date.



The **Holiday Management** function can be enabled or disabled in the **Timer** settings menu.



• Add: You can specify holidays:

Click the Add button in the Holiday Management window.



- Delete: Delete holidays: check the corresponding checkboxes and click this button.
- List of holidays: View a list of holidays you have added.

Screen Burn Protection



Pixel Shift



Move the screen slightly at specified time intervals to prevent screen burn-in.

Screen Saver



This function prevents screen burn-in when the screen of the selected display device is left idle for an extended period of time.

- Interval: Set the interval to activate the Screen Saver.
- Mode: The Time setting can vary for each Mode.

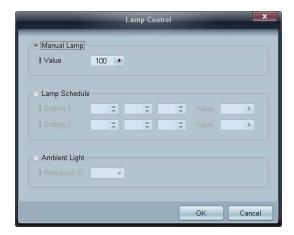
Safety Screen



The **Safety Screen** function can be used to prevent screen burn-in when a stationary image displays on the screen of a display device for an extended period of time.

Lamp Control

Lamp Control is used to adjust the backlight to reduce power consumption.



Automatically adjust the backlight of the selected display device at a specified time.

If Manual Lamp Control is adjusted, Auto Lamp Control will automatically switch to Off.

Manually adjust the backlight for the selected display.

If Auto Lamp Control is adjusted, Manual Lamp Control will automatically switch to Off.

• Ambient Light: Ambient Light detects ambient light intensity and automatically adjusts the screen brightness of all the LFDs in the same serial chain.

Tool Settings



Security

Panel Control

Turn on or off the screen of a display device.

Remote Control

Enable or disable the remote control.

2 Reset

Reset Picture

Reset the screen settings.

Reset Sound

Reset the sound settings.

Reset System

Reset the system settings.

Reset All

Reset the screen, sound and system settings at the same time.

3 Edit Column



Select the items you want to display in the list of sets.

4 Information

View the program information.

Other Functions

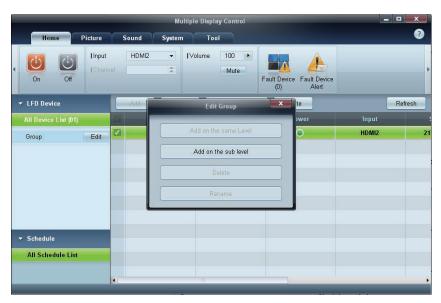
Resizing a Window

Place the mouse pointer on a corner of the program window. An arrow will appear. Move the arrow to customize the size of the program window.



Group Management

Creating Groups



Create groups and manage the list of sets on a group basis.

- Duplicate group names cannot be used.
- 1 Right-click and select **Group>Edit** in the display device list section on the left side of the program window.
- 2 In the Edit Group window displayed, click Add on the sub level or Add on the same level.
 - Add on the sub level: Create a sub-group under the selected group.



• Add on the same level: Create a group on the same level as the selected group.



- The **Add on the same level** button is enabled only if at least one group is created.
- 3 Enter the group name.

Deleting Groups

- 1 Select a group name, and click Edit.
- 2 In the Edit Group window displayed, click Delete.



3 Click **Yes**. The group will be deleted.

Renaming Groups

- 1 Select a group name, and click Edit.
- 2 In the **Edit Group** window displayed, click **Rename**.



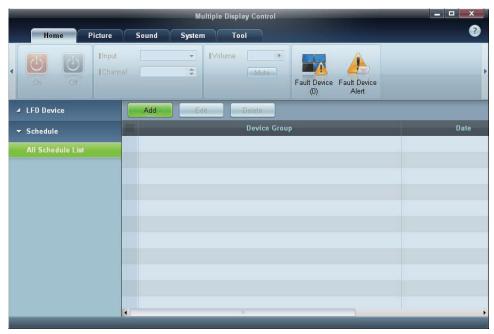
3 If a cursor appears in the old group name, enter a new group name.

Schedule Management

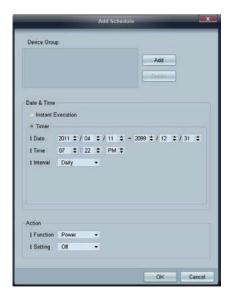
Creating Schedules

Create and register a schedule on a group basis.

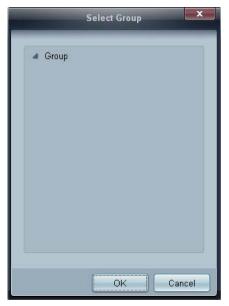
1 Click **All Schedule List** in the schedule section on the left side of the program window. The **Add** button will be enabled in the middle.



2 Click the **Add** button. The **Add Schedule** window will appear.



3 Click **Add** below the **Device Group** item, and select the group you want to add a schedule to.



- Select Date&Time/Action and click OK. The schedule will be added and a list of schedules will appear in the set list window.
 - **Device Group**: Select a group.
 - Date&Time
 - Instant Execution: Run the schedule immediately.
 - **Timer** Set the date, time and interval to run the schedule.
 - Action: Select a function that will activate at the specified time and interval.

Schedule Modification

To modify a schedule, select the schedule and click Edit.

Deleting a Schedule

To delete a schedule, select the schedule and click **Delete**.

Troubleshooting Guide

Issue		Solution
The display you want to control does not appear on the system information chart.	1.	Check the connection of the RS232C cable (check that the cable is properly connected to appropriate serial port).
	2.	Check that another display with a duplicate ID is not connected. Connecting displays with a duplicate ID can cause the displays not to be shown due to data collision.
	3.	Check that the display ID is within the range of 0 and 99. (Change the ID using the Display menu.)
		For a display that supports the ID in a range of 0 to 99, the ID should be set between 0 and 99.
The display you want to control does not appear on the other Control Info Grids.	Check that the display is powered on. (See the power status in the system information chart.)	
	Ens	sure you select the input source the display is connected to.
The following message appears repeatedly.	Che	eck that the display you want to control is selected.
Please make selection in the information grid before controlling. OK Please make selection in the example		
Displays power on or off at different time from one another even though On Time or Off Time is set.	_	ust the time on the PC to synchronize the time between the nnected displays.
The remote control does not work.	ren Co	e remote control may not work if the RS-232C cable is noved or the program is closed abnormally while the Remote ntrol function is Disable . To resolve this, run the program ain and set Remote Control to Enable .



This program may malfunction sometimes due to a communication problem between the PC and display or electromagnetic waves emitted from nearby electronic devices.

How display properties are shown when multiple displays are used

- 1 When no display is selected: The default value is displayed.
- 2 When one display is selected: Settings for the selected display are displayed.
- When two displays are selected (e.g. in sequence of **ID** 1 and **ID** 3): The settings for **ID** 1 are displayed before the settings for **ID** 3.
- 4 When the All+Select checkbox is checked and all displays are selected: The default settings are displayed.

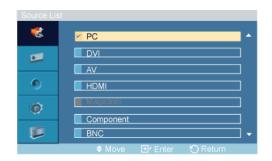
Adjusting the PDP Display

Input

Available Modes

- PC/DVI/BNC
- AV
- **Ш** нрмі
- Component

Source List PAHC



Use to select **PC**, **DVI** or other external input sources connected to the PDP Display. Use to select the screen of your choice.

- 1. **PC**
- 2. **DVI**
- 3. **AV**
- 4. **HDMI**
- 5. **MagicInfo** Enabled when a network box is connected.
- 6. Component
- 7. **BNC**



• The direct button on the remote control is the 'SOURCE' button.

Edit Name PAHC





Name the input device connected to the input jacks to make your input source selection easier.

VCR / DVD / Cable STB / HD STB / Satellite STB / AV Receiver / DVD Receiver / Game / Camcorder / DVD Combo / DHR / PC



• Set Edit Name to PC when a PC is connected via the HDMI or DVI port.

In most other cases, set Edit Name to AV.

Note that **Edit Name** should be set to the connected source device if the source device's signal is 640 x 480, 720p (1280 x 720), or 1080p (1920 x 1080) because these signals are compatible with both AV and PC input.

• The **Picture** menu changes depending on the input signal and **Edit Name**.

Picture [PC / DVI / BNC Mode]

Available Modes

- PC/DVI/BNC
- 🔼 AV
- HDMI
- · Component



- MagicInfo can only be enabled when a network box is connected.
- The **HDMI** port and network box cannot be connected at the same time.

MagicBright P



The **MagicBright** function is only enabled in PC mode. The function offers a picture that is twice as bright and vivid as conventional monitors so that users' various needs (to prepare documents, use the Internet, view videos, etc.) are satisfied.

1. Entertain

High brightness

For watching motion pictures such as a DVD or VCR.

2. Internet

Medium brightness

For working with a mixture of images such as texts and graphics.

3. Text

Normal brightness

For documentations or works involving heavy text.

4. Custom

Although the values are carefully chosen by our engineers, the pre-configured values may not be comfortable to your eyes depending on your taste.

If this is the case, adjust the brightness and contrast by using the OSD menu.

Custom P

By using the on-screen menus, the contrast and brightness can be changed to your personal preference.



By adjusting the picture using the Custom function, MagicBright will change to Custom mode.

Contrast



Adjusts the Contrast.

Brightness



Adjusts the Brightness.

Sharpness



Adjusts the Sharpness.



The color tones can be changed.

- 1. **Off**
- 2. Cool
- 3. Normal
- 4. Warm
- 5. Custom



If you set the Color Tone to Cool, Normal, Warm, or Custom, the Color Temp function is disabled.

If you set the Color Tone to Off, the Color Control function is disabled.

Color Control PM

Adjusts individual Red, Green, Blue color balance.



If you adjust the picture by using the **Color Control** function, **Color Tone** will turn to the **Custom** mode.

Red



Green



Blue



Color Temp. 🖸



Color Temp. is a measure of the 'warmth' of the image colors.



This function is only enabled if the Color Tone is set to Off.

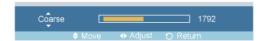
Image Lock 🛭

Image Lock is used to fine-tune and get the best image by removing noise that creates unstable images with jitters and shakiness. If satisfactory results are not obtained using the Fine adjustment, use the Coarse adjustment and then use Fine again.



Available in PC mode only

Coarse



Removes noise such as vertical stripes. Coarse adjustment may move the screen image area. You may relocate it to the center using the horizontal control menu.

Fine



Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed).

Position

1. H-Position



Adjusts the screen location horizontally.

2. V-Position



Adjusts the screen location vertically.

Auto Adjustment P



The values of **Fine**, **Coarse**, **Position** are adjusted automatically. By changing the resolution in the control panel, the auto function is performed.



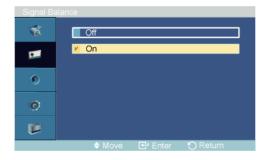
Enabled in **PC** or **BNC** mode only.

Signal Balance 🛭



- Enabled in **PC** or **BNC** mode only.
- This is used to make up for the weak RGB signal transmitted by a long signal cable.

Signal Balance



Selects either **On** or **Off** with the signal balance.

Signal Control

1. R-Gain



2. G-Gain



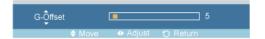
3. **B-Gain**



4. R-Offset



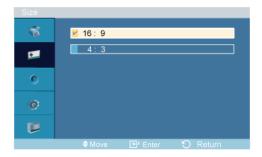
5. **G-Offset**



6. **B-Offset**



Size 📔



The **Size** can be switched.

- 1. **16:9**
- 2. **4:3**

Picture [AV / HDMI / Component Mode]

Available Modes

- PC / DVI / BNC
- AV
- HDMI

• Component

Mode AHG



The PDP Display has four automatic picture settings ("Dynamic", "Standard", "Movie" and "Custom") that are preset at the factory.

Dynamic, Standard, Movie, or Custom can be activated.

- 1. Dynamic
- 2. Standard
- 3. Movie
- 4. Custom

Custom AHC

By using the on-screen menus, the contrast and brightness can be changed to your personal preference.

Contrast



Adjusts the Contrast.

Brightness



Adjusts the Brightness.

Sharpness



Adjusts the picture Sharpness.

Color



Adjusts the picture Color.

Tint



Adds a natural tone to the display.

Color Tone AllC



The color tones can be changed. The individual Color components are also user adjustable.

- 1. **Off**
- 2. Cool2
- 3. Cool1
- 4. Normal
- 5. Warm1
- 6. Warm2



If you set the Color Tone to Cool2, Cool1, Normal, Warm1, or Warm2, the Color Temp function is disabled.

Color Temp. All C



Color temp. is a measure of the 'warmth' of the image colors.



This function is only enabled if the Color Tone is set to Off.

Size AHC



The Size can be switched.

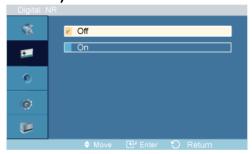
1. **16:9** - Sets the picture to 16:9 wide mode.

- 2. **Zoom 1** Magnifies the size of the picture on the screen.
- 3. **Zoom 2** Magnifies the size of the picture more than "**Zoom 1**".
- 4. **4:3** Sets the picture to 4:3 normal mode.
- 5. **Just Scan** Displays the input scenes as they are without any cutoff when **HDMI** / **Component** 720p, 1080i, 1080p signals are input.



- Certain external devices may feed the display an out of spec signal that may cause cutoff even when using the **Screen Fit** feature.
- **Zoom1** and **Zoom2** are not available in HDMI or Component mode.
- The **Position** and **Reset** functions are available in **Zoom 1** or **Zoom 2** modes.

Digital NR (Digital Noise Reduction)



Turns the Digital Noise Reduction feature **Off/On**. The Digital Noise Reduction feature allows you to enjoy clearer and crisper images.

Deactivated in HDMI / AV with a resolution of 1080p.

- 1. **Off**
- 2. **On**



Digital NR function is not available for all resolutions.

Film Mode ACH



The **Film Mode** feature offers you a theater-quality viewing experience.

Film Mode is supported in AV, Component (480i / 1080i) and HDMI (480i / 1080i).



- In **HDMI** mode, this function can be available when the input signal is interlaced scan; it cannot be available with progressive scan signal.
- 1. **Off**
- 2. **On**

Sound

Available Modes

- PC/DVI/BNC
- AV
- **Ш** нрмі
- · Component

Mode PAHC



The PDP Display has a built-in high fidelity stereo amplifier.

1. Standard

Selects **Standard** for the standard factory settings.

2. Music

Selects **Music** when watching music videos or concerts.

3. Movie

Selects Movie when viewing movies.

4. Speech

Selects **Speech** when watching a show that is mostly dialogue (i.e., news).

5. Custom

Selects **Custom** if you want to adjust the settings according to your personal preferences.

Custom PAHC

The sound settings can be adjusted to suit your personal preferences.



- You can hear the sound even when sound value is set to 0.
- If you adjust sound using **Custom** function, **Mode** will turn to **Custom** mode.

Bass



Emphasizes low frequency audio.

Treble



Emphasizes high frequency audio.

Balance



Allows you to Adjusts the sound balance between the left and right speakers.

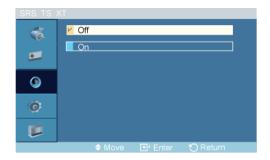
Auto Volume PAHC



Reduces the difference in volume control between broadcasters.

- 1. **Off**
- 2. **On**

SRS TS XT PAHC



SRS TS XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers. TruSurround delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multichannel formats.

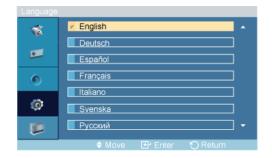
- 1. **Off**
- 2. **On**

Setup

Available Modes

- PC/DVI/BNC
- 🔼 AV
- 🔢 HDMI
- Component

Language PAHC



You can choose one of 13 languages.

English,Deutsch,Español,Français,Italiano,Svenska,Русский Português,Türkçe, 简体中文,繁體中文, 日本語, 한국어



The language chosen affects only the language of the OSD. It has no effect on any software running on the computer.

Time PAHC

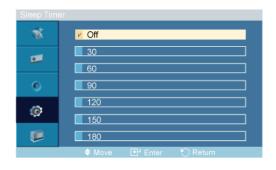
You can set the time.

Clock Set



Current Time Setting.

Sleep Timer



Turns the PDP Display off automatically at certain times.

- 1. **Off**
- 2. **30**
- 3. **60**
- 4. 90
- 5. **120**
- 6. 150
- 7. **180**

Timer1 / Timer2 / Timer3



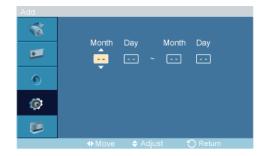
You can set the PDP display to automatically turn on or off at a specified time.



- Only enabled when the clock is set using the Clock Set menu.
- The **Manual** option allows you to select a day of the week.
- **Holiday**: When Choose **Apply**, timer is not available on holiday; when choose **Don't apply**, timer is available on holiday.

Holiday Management

Add



You can register holidays.

Delete Selected



You can delete selected holidays.



- Only enabled when registered holidays are selected.
- More than one holiday can be selected and deleted.

Delete All



You can delete all the registered holidays.

Menu Transparency PAHC



Change the transparency of the background of the OSD.

- 1. High
- 2. Medium
- 3. Low
- 4. **Opaque**

Safety Lock PACHM

Change PIN



The password can be changed.

The preset password for the PDP Display is "0000".



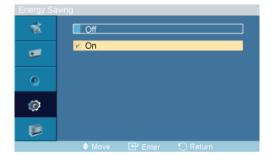
• If you forgot your password, press the remote buttons **INFO** + **EXIT** + **MUTE** to reset the password to "0000."

Lock



This is the function that locks the OSD in order to keep the current settings or to prevent others from adjusting the settings.

Energy Saving PACH



This feature adjusts the power consumption of the unit in order to save energy.

- 1. **Off**
- 2. **On**



If Energy Saving mode is Off, you can obtain the maximum display brightness.

HDMI Black Level 11



When a DVD or set-top box is connected to your Product via HDMI, it may cause a degradation in the screen quality, such as an increase in the black level, a low contrast, or discoloration, etc., depending on the external device connected. In this case, adjust the screen quality of your TV by configuring the **HDMI Black Level**.

- 1. Normal
- 2. Low

Video Wall PHAC

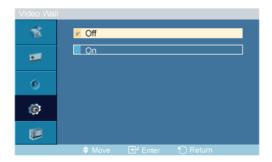
A Video Wall is a set of video screens connected together, so that each screen shows a part of the whole picture or where the same picture is repeated on each screen.

When the Video Wall is on, you can adjust the Video Wall screen setting.



When Video Wall is running, the Auto Adjustment, Image Lock, and Size functions are not available. Video Wall does not operate in MagicInfo mode.

Video Wall



Turns Off/On the Video Wall function of the selected display Off/On.

- 1. **Off**
- 2. **On**

Format



The **Format** can be selected to see a divided screen.

1. Full

Provides a full screen without any margins.

2. Natural

Displays a natural image with the original aspect ratio intact.

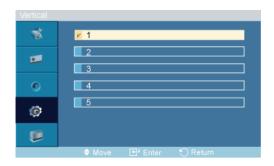
Horizontal



Sets how many parts the screen should be divided horizontally.

Five adjustment levels: 1, 2, 3, 4, and 5.

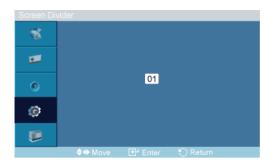
Vertical



Sets how many parts the screen should be divided vertically.

Five adjustment levels: 1, 2, 3, 4, and 5.

Screen Divider



The screen can be divided into several images. A number of screens can be selected with a different layout when dividing.

- Select a mode in Screen Divider.
- Select a display in Display Selection.

• The selection will be set up by pressing a number in the selected mode.

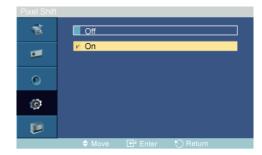
Safety Screen PAHMC

The **Safety Screen** function is used to prevent afterimages that may appear when a still picture is displayed on the screen over a long time.

- The Safety Screen function scrolls the screen for the specified period of time.
- This function is not available when the power is turned off.

Pixel Shift

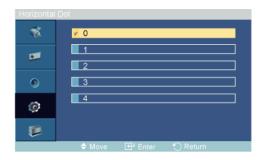
Pixel Shift



To prevent after-images on the screen you can use this function, so that every minute pixels on the PDP are moved in horizontal or vertical direction.

- 1. **Off**
- 2. **On**

Horizontal Dot



Sets how many pixels the screen moves horizontally.

Five adjustment levels: 0, 1, 2, 3, and 4.

Vertical Line



Sets how many pixels the screen moves vertically.

Five adjustment levels: 0, 1, 2, 3, and 4.

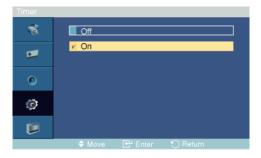
Time



Set the time interval for performing the horizontal or vertical movement, respectively.

Timer

Timer



You can set the timer for Screen Burn Protection.

If you start the operation to erase any residual image, the operation will be performed for the set period of time and then automatically finish.

- 1. **Off**
- 2. **On**

Mode



You can change the Safety Screen Type.

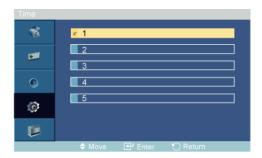
- 1. Scroll
- 2. Bar
- 3. Eraser
- 4. All White
- 5. Pattern

Period



Use this function to set the execution period for each mode set in the timer.

Time



Within the set period of time specify a time for execution.

• Mode-Scroll : 1~5 sec

• Mode-Bar, Eraser: 10~50 sec

• Mode-All White, Pattern: 1, 5, 10, 20 30 min

Scroll



This function prevents after-images on the screen by moving all the pixels on the PDP according to a pattern.

Use this function when there are remaining after-images or symbols on the screen, especially when you displayed a still image on the screen for a long time.

Bar



This function prevents after-images on the screen by moving long black and white vertical lines.

Eraser



This function prevents after-images on the screen by moving a rectangular pattern.

All White



This function prevents after-images on the screen by changing the color of pixels to white.

Use this function when there are remaining after-images or symbols on the screen, especially when you displayed a still image on the screen for a long time.

Pattern



This function prevents after-images on the screen by moving a diagonal pattern stored in the panel repeatedly.

Resolution Select P



When the picture is not displayed properly on the screen when setting the graphics card resolution of the computer to 1024 x 768 @ 60Hz, 1280 x 768 @ 60Hz, 1360 x 768 @ 60Hz or 1366 x 768 @

60Hz, by using this function(Resolution Select), you can have the picture displayed on the screen in the specified resolution.



Available in PC mode only

- 1. **Off**
- 2. 1024 x 768
- 3. 1280 x 768
- 4. 1360 x 768
- 5. 1366 x 768



Selecting the menu is only allowed when the graphics resolution is set to 1024×768 @ 60Hz, 1280×768 @ 60Hz, 1360×768 @ 60Hz or 1366×768 @ 60Hz.

Power On Adjustment PAHC



Adjust the Power On time for the screen.



Caution: Set the Power On time to be longer to avoid overvoltage.

Side Gray PAHC



Select the brightness of the grey for the screen background.

- 1. **Off**
- 2. Light
- 3. Dark

Reset

Reverts the product settings to factory defaults. The Reset function is only available when $PC \ / \ DVI$ is being used.

Image Reset P





Available in PC mode only

The Reset function is not available when Video Wall is On.

Color Reset PAHC



OSD Rotation PAHG



OSD Rotate

- 1. Landscape
- 2. Portrait

Multi Control

Available Modes

- PC/DVI/BNC
- AV
- HDMI
- · Component

Multi Control PAHC

Assigns an individual ID to the SET.



• ID Setup

Assigns distinctive IDs to the SET.

• ID Input

Use to select the transmitter functions of the individual SET. Only a SET where the ID corresponds to the transmitter setting becomes activated.

Troubleshooting

Self-Test Feature Check



Check the following items yourself before calling for assistance. Contact a Service Center for problems that you cannot solve by yourself.

Self-Test Feature Check

- 1. Turn off both your computer and the PDP Display.
- 2. Unplug the video cable from the back of the computer.
- 3. Turn on the PDP Display.

The figure shown below ("Check Signal Cable") appears on a black background when the PDP Display is working normally even though no video signal is detected: While in the Self-Test mode, the LED power indicator remains green and the figure moves around on the screen.



4. Turn off your PDP Display and reconnect the video cable; then turn on both your computer and the PDP Display

If your PDP Display screen remains blank after using the previous procedure, check your video controller and computer system; your PDP Display is functioning properly.

Warning Messages

You can even view the screen at a resolution of 1920 x 1080. However, you will receive the following message for a minute; You can choose to change the screen resolution or stay in the current mode during that time. And if the resolution is more than 85Hz, you will see the black screen because the PDP Display does not support over 85Hz.

Not Optimum Mode

Recommended Mode 1920 x1080 60Hz



Refer to Specifications > Preset Timing Modes for the resolutions or frequencies supported by the PDP Display.

Maintenance and Cleaning

1) Maintaining the PDP Display Case.

Clean with a soft cloth after disconnecting the power cord.



• Do not use benzene, thinner or other flammable substances, or a wet cloth.

2) Maintaining the Flat Panel Display Screen.

Clean with a soft cloth (cotton flannel) smoothly.



• Never use acetone, benzene or thinner.

(They may cause flaws or deformation of the screen surface.)

• The user will be required to pay costs and related expenses for repairing damages caused.

Symptoms and Recommended Actions



A PDP Display recreates visual signals received from the computer. Therefore, if there is a problem with the computer or the video card, this can cause the PDP Display to become blank, have poor coloring, become noisy, and video mode not supported, etc. In this case, first check the source of the problem, and then contact a Service Center or your dealer.

- 1. Check if the power cord and the video cables are properly connected to the computer.
- 2. Check if the computer beeps more than 3 times when booting.

(If it does, request an a service for the main board of the computer.)

- 3. If you installed a new video card or if you assembled the PC, check if you installed the Adaptor (video).
- 4. Check if the scanning ratio of the video screen is set to between $50 \text{ Hz} \sim 85 \text{ Hz}$.

(Do not exceed 60Hz when using the maximum resolution.)

5. If you have problems in installing the Adaptor (video) driver, boot the computer in Safe Mode, remove the Display Adaptor in the "Control Panel -> System -> Device Administrator" and then reboot the computer to reinstall the Adaptor (video) driver.

Check List



• The following table lists possible problems and their solutions. Before calling for assistance, check the information in this section to see if you can remedy any problems for yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Problems related to the Installation (PC Mode)



Problems related to the PDP Display installation and their solutions are listed.

- Q: The PDP Display screen flickers.
- A: Check if the signal cable between the computer and the PDP Display is securely connected.

(Refer to Connecting a Computer)

Problems related to the Screen



Problems related to the PDP Display screen and their solutions are listed.

- Q: The screen is blank and the power indicator is off.
- A: Ensure that the power cord is firmly connected and the PDP Display is on.

(Refer to the Connecting a Computer)

- Q: "Check Signal Cable" message.
- A: Ensure that the signal cable is firmly connected to the PC or video sources.

(Refer to the Connecting a Computer)

- A: Ensure that the PC or video sources are turned on.
- Q: "Not Optimum Mode" message.
- A: Check the maximum resolution and the frequency of the video Adaptor.
- A: Compare these values with the data in the Preset Timing Modes Chart.
- Q: The picture rolls vertically.
- A: Check if the signal cable is securely connected. Re-connect it, if necessary.

(Refer to Connecting a Computer)

- Q: The image is not clear; picture is blurred.
- A: Run Frequency Coarse and Fine tuning.
- A: Turn on again after removing all accessories (video extension cable, etc.)
- A: Set the resolution and frequency to the recommended ranges.
- Q: The picture image is unstable and shakes.
- A: Check if the resolution and frequency set for the computer video card falls in the range supported by the PDP Display. If not, reset them referring to the current Information under the PDP Display menu and Preset Timing Modes.
- Q: Ghost images are shown in the picture.
- A: Check if the resolution and frequency set for the computer video card falls in the range supported by the PDP Display. If not, reset them referring to the current Information under the PDP Display menu and Preset Timing Modes.
- Q: The image is too light or too dark.
- A: Adjusts the **Brightness** and **Contrast**.

(Refer to the Brightness, Contrast)

- Q: The screen color is inconsistent.
- A: Adjust color using **Custom** under OSD Color Adjustment menu.

- Q: The color image is distorted by dark shadows.
- A: Adjust color using **Custom** under OSD Color Adjustment menu.
- Q: The color white is poor.
- A: Adjust color using **Custom** under OSD Color Adjustment menu.
- Q: The Power Indicator blinks.
- A: The PDP Display is currently saving the changes made to the settings to the OSD memory.
- Q: The screen is blank and the power indicator light blinks every 0.5 or 1 seconds. The PDP Display is using its power management system. Press any key on the keyboard.
- A: The PDP Display is using its power management system. Press a key on the keyboard.
- Q: The screen is blank and it is blinking.
- A: If you see the "TEST GOOD" message on the screen when you pressing the MENU button, check the cable connection between the PDP Display and the computer to ensure that the connector is properly connected.

Problems related to Audio



Problems related to audio signals and their solutions are listed below.

- Q: No sound.
- A: Ensure that the audio cable is firmly connected to both the audio-in port on your PDP Display and the audio-out port on your sound card.

(Refer to the Connecting a Computer)

- A: Check the volume level.
- Q: The sound level is too low.
- A: Check the volume level.
- A: If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program.
- Q: The sound is too high or too low.
- A: Adjusts the **Treble** and **Bass** to the appropriate levels.

Problems related to the Remote Control



Problems related to the remote control and their solutions are listed.

- Q: The remote control buttons do not respond.
- A: Check the polarities (+/-) of the batteries.
- A: Check if the batteries are empty.
- A: Check if the power is on.

- A: Check if the power cord is securely connected.
- A: Check if a special fluorescent or neon lamp is on in the vicinity.

Q & A

- Q: How can I change the frequency?
- A: The frequency can be changed by reconfiguring the video card.



That video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)

- Q: How can I Adjust the resolution?
- A: Windows XP:

Set the resolution in the Control Panel \rightarrow Appearance and Themes \rightarrow Display \rightarrow Settings.

A: Windows ME/2000:

Set the resolution in the Control Panel \rightarrow Display \rightarrow Settings.

- * Contact the video card manufacturer for details.
- Q: How can I set the Power Saving function?
- A: Windows XP:

Control Panel \rightarrow Appearance and Themes \rightarrow Display \rightarrow Enable the powersaving feature in Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

A: Windows ME/2000:

Control Panel \rightarrow Display \rightarrow Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

- Q: How can I clean the outer case/PDP Panel?
- A: Disconnect the power cord and then clean the PDP Display with a soft cloth, using either a cleaning solution or plain water.

Do not leave any detergent or scratches on the case. Do not let any water enter the PDP Display.

- Q: How can I play the video?
- A: The video supports the MPEG1 and WMV codecs only. Install the corresponding codec to play the video. Note that some of the codecs can be incompatible.



Before calling for assistance, check the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Specifications

General

Model Name	SyncMaster P64FP
	SyncMaster P64FT

PDP Panel

Size	64 inches / 162 cm
Display Area	1416.96 mm (H) x 797.04 mm (V)
Pixel Pitch	0.738 mm (H) x 0.738 mm (V)

Synchronization

Horizontal	30~81 kHz
Vertical	56~75 Hz

Display Color

16.77M

Resolution

Optimum resolution	1920 x 1080 @ 60 Hz
Maximum resolution	1920 x 1080 @ 60 Hz

Maximum Pixel Clock

165MHz (Analog, Digital)

Power Supply

This product supports 100 - 240 V.

Since the standard voltage may differ from country to country, please check the label on the back of the product.

Signal connectors

DVI-D In/Out(Can connect up to 10 PDP display units.), D-sub, AV(Composite, CVBS), HDMI, RS232C In/Out PC Audio In, Audio In(Stereo), Audio Out(Stereo).

Dimensions (W x H x D) / Weight

1503.5 x 894.0 x 99.4 mm / 52.0 kg,

59.1 x 35.1 x 3.9 inches / 114 lbs

VESA Stand

676 mm x 407 mm

Environmental considerations

Operating	Temperature : $32^{\circ}F \sim 104^{\circ}F (0^{\circ}C \sim 40^{\circ}C)$	
	Humidity : 20 % \sim 80 %, non-condensing	

Environmental considerations

Storage Temperature : $-4^{\circ}F \sim 113^{\circ}F (-20^{\circ}C \sim 45^{\circ}C)$

Humidity: 5 % ~ 95 %, non-condensing

Plug and Play Capability

This PDP Display can be installed on any Plug & Play compatible system. The interaction of the PDP Display and the computer systems will provide the best operating conditions and PDP Display settings. In most cases, the PDP Display installation will proceed automatically, unless the user wishes to select alternate settings.

Dot Acceptable

TFT-LCD panels manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above are used for this product. But the pixels of RED, GREEN, BLUE and WHITE Color appear to be bright sometimes or some black pixels may be seen. This is not from bad quality and you can use it without any problems.

For example, the number of TFT-LCD sub pixels contained in this product are 6,220,800.



Design and specifications are subject to change without prior notice.

Class A (Information Communication equipment for industrial use)

Attention dealers and users. This device is registered for EMC requirements for industrial use (Class A) and can be used in areas other than general households.



[Recommendation] - EU Only (P64FT Model Only)

Hereby, Samsung Electronics, declares that this [PDP Display] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC

(USA only)

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:

www.samsung.com/recyclingdirect Or call, (877) 278 - 0799

PowerSaver

This PDP Display has a built-in power management system called PowerSaver. This system saves by switching your PDP Display to low-power mode when it has not been used for a certain amount of time. The PDP Display automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your PDP Display OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPM compliant video card installed in your computer. Use the software utility installed on your computer to set up this feature.

PowerSaver

State	Normal Opera- tion	Power saving mode	Power off
Power Indicator	On	Blinking	Off

State	Normal Opera- tion	Power saving mode	Power off
Power Consumption	550 watts	2 watts	0 watt
(Typical)			



- The actual power consumption may be different from the indicated power consumption if the system condition or settings are changed.
- To stop any power consumption, disconnect the power cable on the back. Be sure to disconnect the power if you intend to stay away from home for many hours.

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjusts the screen as follows.

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
IBM, 640 x 480	31.469	59.940	25.175	-/-
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 768	47.776	59.870	79.500	+/+
VESA, 1280 x 960	60.000	60.000	108.000	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1360 x 768	47.712	60.015	85.500	+/+
VESA, 1600 x 1200	75.000	60.000	162.000	+/-
VESA, 1920 x 1080	67.500	60.000	147.500	+/-



Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle and the inverse number of the Horizontal Cycle is called the Horizontal Frequency. Unit: kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the user. The frequency of this repetition is called the Vertical Frequency or Refresh Rate. Unit: Hz

Information

For Better Display

- Adjust the computer resolution and screen injection rate (refresh rate) on the computer as described below to enjoy the best picture quality. You can have an uneven picture quality on screen if the best picture quality is not provided for PDP.
- Resolution: 1920 x 1080
- Vertical frequency (refresh rate): 60 Hz
- PDP panels manufactured by using advanced semiconductor technology with a precision of 1ppm (one millionth) and above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without any problems.
- For example, the number of PDP sub pixels contained in this product are 6,220,800.
- When cleaning the monitor and the panel outside, please apply the recommended small amount of cleaner by using a soft cloth to polish. Do not force the PDP area but rub softly. If excessive force is applied, you may stain it.
- If you are not satisfied with the picture quality, you can get better quality of picture by performing the "Auto Adjustment function" in display screen that is appeared as window termination button is pressed. If there's still noise after the automatic adjustment, use the Fine/Coarse adjustment function.
- When viewing a fixed screen for an extended period of time, a residual image or blurriness may appear. Change the mode to energy save or set a screensaver to move the picture when you need to be away from the monitor for an extended period of time.

PRODUCT INFORMATION (Image Retention Free)

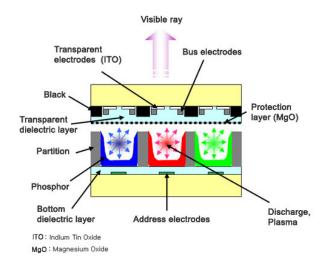
What is Image Retention?

Image retention may not occur when a PDP panel is operated under normal conditions.

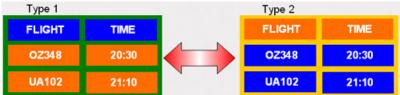
Normal conditions are defined as continuously changing video patterns. When the PDP panel is operated for a long time with a fixed pattern.

Phosphor degradation may occur and the brightness is decreased. To prevent this, the video pattern should be changed from time to time.

When viewing a still screen for a long time, the brightness of any part which was bright in the previous fixed pattern becomes lower than that of its surroundings.



- Power Off, Screen Saver, or Power Save Mode
- Turn the power off for 4 hours after 20 hours in use
- Turn the power off for 2 hours after 12 hours in use
- Set the Monitor to power off with the PC Display Properties Power Scheme.
- Use a Screen saver if possible Screen saver in one color or a moving image is recommended.
- Change the Color Information periodically





Use Two different colors

Rotate the Color Information with 2 different colors every 30 minutes.

 Avoid using a combination of characters and background color with large difference in luminance.

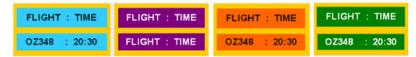
Avoid using Grey colors, which can cause Image retention easily.

Avoid: Colors with big difference in luminance (Black & White, Grey)

FLIGHT : TIME FLIGHT : TIME OZ348 : 20:30

Change the characters color periodically

- Use Bright colors with little difference in luminance.
 - Cycle: Change the characters color and background color every 30 minutes



• Every 30 minutes, change the characters with movement.



- All area display Moving image together with Logo periodically.
 - Cycle: Display moving image together with Logo for 60 seconds after 4 hours in use.
- The best way to protect your monitor from Image retention is to turn Power off, or set your PC, or System to operate a Screen Saver program when you are not using it. Also Warranty service will be limited based on instruction guide.
- Apply the Screen Scroll function on Product
- Apply the Screen Scroll function
 - Symptom: Horizontal Bar with Black Color move up and down.





Please check CD's User Guide at "OSD Function", some model's will not available.

- Apply the Screen Pixel function on Product
- Apply the Screen Pixel function
 - Symptom: Dot with Black Color move up and down.



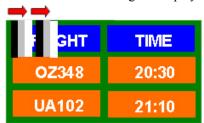
- Apply the Screen Bar function
 - Symptom: Horizontal / Vertical Bar with Black Color move up and down.





Please check CD's User Guide at "OSD Function", some model's will not available.

- Apply the Screen Erasing function on Product
- Apply the Screen Erasing function
 - Symptom: 2 Vertical blocks move with erasing the display





Please check CD's User Guide at "OSD Function", some model's will not available.

Appendix

Contact SAMSUNG WORLDWIDE



If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

	North America	
U.S.A	1-800-SAMSUNG (726-7864)	http://www.samsung.com
CANADA	1-800-SAMSUNG (726-7864)	http://www.samsung.com/ca
		http://www.samsung.com/ca_fr (French)
MEXICO	01-800-SAMSUNG (726-7864)	http://www.samsung.com
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	4004-0000	
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	From mobile 02-482 82 00	
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HONDURAS	800-27919267	http://www.samsung.com
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NICARAGUA	00-1800-5077267	http://www.samsung.com
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PUERTO RICO	1-800-682-3180	http://www.samsung.com
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VENEZUELA	0-800-100-5303	http://www.samsung.com
	Europe	
ALBANIA	42 27 5755	http://www.samsung.com
AUSTRIA	0810 - SAMSUNG (7267864, € 0.07/min)	•
BELGIUM	02-201-24-18	http://www.samsung.com/be (Dutch)

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		http://www.samsung.com/be_fr (French)
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BULGARIA	07001 33 11	http://www.samsung.com
CROATIA	062 SAMSUNG (062 726 7864)	http://www.samsung.com
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	Samsung Electronics Czech and Slovak, s.r.o Sokolovská 394/17, 180 00, Praha 8	., Oasis Florenc,
DENMARK	70 70 19 70	http://www.samsung.com
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	1800 3000 8282		
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JAPAN	0120-327-527	http://www.samsung.com	
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	1-800-3-SAMSUNG(726-7864) for Digitel	
	1-800-8-SAMSUNG(726-7864) for Globe	
	02-5805777	
SINGAPORE	1800-SAMSUNG (726-7864)	http://www.samsung.com
THAILAND	1800-29-3232	http://www.samsung.com
	02-689-3232	
TAIWAN	0800-329-999	http://www.samsung.com
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	0266-026-066	•
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Middle East		
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	0302-200077	
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TANZANIA	0685 88 99 00	http://www.samsung.com
UGANDA	0800 300 300	http://www.samsung.com

Terms

Dot Pitch

The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

Vertical Frequency The screen must be redrawn several times per second in order to

create and display an image for the user. The frequency of this repetition per second is called the Vertical Frequency or Refresh

Rate. Unit: Hz

Example: If the same light repeats itself 60 times per second, this

is regarded as 60 Hz.

Horizontal Frequency The time to scan one line connecting the right edge to the left edge

of the screen horizontally is called the Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Fre-

quency. Unit: kHz

Interlace and Non-Interlace

Methods

Showing the horizontal lines of the screen from the top to the bottom sequentially is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace

method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same

as that used in TVs.

Plug & Play

This is a function that provides the best quality screen for the user

by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard

VESA DDC for the Plug & Play function.

Resolution The number of horizontal and vertical dots used to compose the

screen image is called the 'resolution'. This number shows the accuracy of the display. A high resolution is good for performing multiple tasks as more image information can be shown on the

screen.

Example: If the resolution is 1920 x 1080, this means the screen is composed of 1920 horizontal dots (horizontal resolution) and

1080 vertical lines (vertical resolution).

SRS TS XT This feature outputs sonorous and vivid 3D sound as for 5.1 chan-

nel speaker sound but through a 2-channel speaker. It has a good

effect when stereo signals are input.

Multiple Display Control

(MDC)

A Multiple Display Control (MDC) is an application allowing

various displays to be easily and simultaneously operated on a PC. RS-232C, a standard of serial communication, is used for com-

municating between a PC and a display.

Correct Disposal

Correct Disposal of This Product (Waste Electrical & Electronic Equipment) - Europe only



(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

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To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.



The rechargeable battery incorporated in this product is not user replaceable. For information on its replacement, please contact your service provider.

Authority

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